

10/559,519

=> file registry  
FILE 'REGISTRY' ENTERED AT 13:31:47 ON 05 MAR 2007  
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STRUCTURE FILE UPDATES: 4 MAR 2007 HIGHEST RN 924728-01-8  
DICTIONARY FILE UPDATES: 4 MAR 2007 HIGHEST RN 924728-01-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> file caplus  
FILE 'CPLUS' ENTERED AT 13:31:50 ON 05 MAR 2007  
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FILE COVERS 1907 - 5 Mar 2007 VOL 146 ISS 11  
FILE LAST UPDATED: 4 Mar 2007 (20070304/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.  
They are available for your review at:

<http://www.cas.org/infopolicy.html>  
'OBI' IS DEFAULT SEARCH FIELD FOR 'CPLUS' FILE

=> d stat que L8  
L6 7 SEA FILE=CPLUS ABB=ON PLU=ON MOTOUNE S?/AU  
L7 6112 SEA FILE=CPLUS ABB=ON PLU=ON IKEDA Y?/AU  
L8 7 SEA FILE=CPLUS ABB=ON PLU=ON L6 AND L7

=> d stat que L52

L2 7 SEA FILE=REGISTRY ABB=ON PLU=ON (10043-52-4/BI OR 7647-14-5/B  
 I OR 7786-30-3/BI OR 9004-62-0/BI OR 9004-64-2/BI OR 9004-65-3/  
 BI OR 9004-67-5/BI)  
 L3 8522 SEA FILE=REGISTRY ABB=ON PLU=ON CELLULOSE/CNS  
 L4 4 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND L3  
 L5 3 SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT L4  
 L6 7 SEA FILE=CAPLUS ABB=ON PLU=ON MOTOUNE S?/AU  
 L7 6112 SEA FILE=CAPLUS ABB=ON PLU=ON IKEDA Y?/AU  
 L9 149363 SEA FILE=CAPLUS ABB=ON PLU=ON ?CAPSUL?/BI  
 L10 227466 SEA FILE=CAPLUS ABB=ON PLU=ON DRUG DELIVERY SYSTEMS+OLD/CT  
 L11 25392 SEA FILE=CAPLUS ABB=ON PLU=ON L10 (L) L9  
 L12 414044 SEA FILE=CAPLUS ABB=ON PLU=ON ?CELLULOS?/BI  
 L13 205107 SEA FILE=CAPLUS ABB=ON PLU=ON L3  
 L14 35968 SEA FILE=CAPLUS ABB=ON PLU=ON L4  
 L15 4316 SEA FILE=CAPLUS ABB=ON PLU=ON ALKALI METAL CHLORIDES/CT  
 L16 1210 SEA FILE=CAPLUS ABB=ON PLU=ON ALKALINE EARTH CHLORIDES/CT  
 L17 623 SEA FILE=CAPLUS ABB=ON PLU=ON TRANSITION METAL CHLORIDES/CT  
 L18 1156 SEA FILE=CAPLUS ABB=ON PLU=ON RARE EARTH CHLORIDES/CT  
 L19 642 SEA FILE=CAPLUS ABB=ON PLU=ON INORGANIC CHLORID?/BI  
 L20 187625 SEA FILE=CAPLUS ABB=ON PLU=ON L5  
 L21 150 SEA FILE=CAPLUS ABB=ON PLU=ON L11 AND L14 AND L20  
 L22 1668122 SEA FILE=CAPLUS ABB=ON PLU=ON (THU OR BAC OR DMA OR PAC OR  
 PKT)/RL  
 L23 614 SEA FILE=CAPLUS ABB=ON PLU=ON (L4 (L) L22) AND (L5 (L) L22)  
 L24 132 SEA FILE=CAPLUS ABB=ON PLU=ON L23 AND L11  
 L25 93555 SEA FILE=CAPLUS ABB=ON PLU=ON (SALT OR SALINE)/BI (2A)  
 SOLUTION?/BI  
 L26 2 SEA FILE=CAPLUS ABB=ON PLU=ON L24 AND L25  
 L27 2 SEA FILE=CAPLUS ABB=ON PLU=ON L21 AND L25  
 L29 1 SEA FILE=REGISTRY ABB=ON PLU=ON WATER/CN  
 L30 3 SEA FILE=CAPLUS ABB=ON PLU=ON L24 AND L29  
 L32 13 SEA FILE=CAPLUS ABB=ON PLU=ON (L5 (L) L22) AND (L29 (L) L22)  
 AND L11  
 L33 4 SEA FILE=CAPLUS ABB=ON PLU=ON L32 AND L12  
 L36 7 SEA FILE=CAPLUS ABB=ON PLU=ON L26 OR L27 OR L30 OR L33  
 L39 112 SEA FILE=CAPLUS ABB=ON PLU=ON L11 AND (L12 OR L13 OR L14)  
 AND (L15 OR L16 OR L17 OR L18 OR L19 OR L20) AND (L29 OR  
 WATER/BI OR AQUEOUS/BI OR L25)  
 L40 105 SEA FILE=CAPLUS ABB=ON PLU=ON L39 NOT L36  
 L41 5 SEA FILE=CAPLUS ABB=ON PLU=ON L39 AND (L29 (L) L22)  
 L42 3 SEA FILE=CAPLUS ABB=ON PLU=ON L25 AND L40  
 L43 79 SEA FILE=CAPLUS ABB=ON PLU=ON L11 AND (L12 OR L13 OR L14)  
 AND ((L15 OR L16 OR L17 OR L18 OR L19 OR L20) (L) L22) AND  
 (L29 OR WATER/BI OR AQUEOUS/BI OR L25)  
 L46 10415 SEA FILE=CAPLUS ABB=ON PLU=ON WATER/BI (1A) ACTIVIT?/BI  
 L47 2 SEA FILE=CAPLUS ABB=ON PLU=ON L43 AND L46  
 L48 5 SEA FILE=CAPLUS ABB=ON PLU=ON L43 AND L25  
 L50 17 SEA FILE=CAPLUS ABB=ON PLU=ON L43 AND EXTRACT?/BI  
 L51 27 SEA FILE=CAPLUS ABB=ON PLU=ON L26 OR L27 OR L30 OR L33 OR  
 L41 OR L42 OR L47 OR L48 OR L50  
 L52 1 SEA FILE=CAPLUS ABB=ON PLU=ON (L6 OR L7) AND L51

=> s L8 or L52  
 L110 7 L8 OR L52

=> file medline  
 FILE 'MEDLINE' ENTERED AT 13:32:23 ON 05 MAR 2007

FILE LAST UPDATED: 3 Mar 2007 (20070303/UP). FILE COVERS 1950 TO DATE.

All regular MEDLINE updates from November 15 to December 16 have been added to MEDLINE, along with 2007 Medical Subject Headings (MeSH(R)) and 2007 tree numbers.

The annual reload will be available in early 2007.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> d stat que L53
L6          7 SEA FILE=CAPLUS ABB=ON  PLU=ON  MOTOUNE S?/AU
L7          6112 SEA FILE=CAPLUS ABB=ON  PLU=ON  IKEDA Y?/AU
L53         1 SEA FILE=MEDLINE ABB=ON  PLU=ON  L6 AND L7
```

```
=> file embase
FILE 'EMBASE' ENTERED AT 13:32:35 ON 05 MAR 2007
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```

FILE COVERS 1974 TO 5 Mar 2007 (20070305/ED)

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> d stat que L88
L6          7 SEA FILE=CAPLUS ABB=ON  PLU=ON  MOTOUNE S?/AU
L7          6112 SEA FILE=CAPLUS ABB=ON  PLU=ON  IKEDA Y?/AU
L88         2 SEA FILE=EMBASE ABB=ON  PLU=ON  L6 AND L7
```

```
=> file biosis
FILE 'BIOSIS' ENTERED AT 13:32:43 ON 05 MAR 2007
Copyright (c) 2007 The Thomson Corporation
```

FILE COVERS 1969 TO DATE.  
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 28 February 2007 (20070228/ED)

```
=> d stat que L106
L6          7 SEA FILE=CAPLUS ABB=ON  PLU=ON  MOTOUNE S?/AU
L7          6112 SEA FILE=CAPLUS ABB=ON  PLU=ON  IKEDA Y?/AU
L106        1 SEA FILE=BIOSIS ABB=ON  PLU=ON  L6 AND L7
```

```
=> dup rem L110 L53 L88 L106
FILE 'CAPLUS' ENTERED AT 13:33:02 ON 05 MAR 2007
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```

FILE 'MEDLINE' ENTERED AT 13:33:02 ON 05 MAR 2007

FILE 'EMBASE' ENTERED AT 13:33:02 ON 05 MAR 2007

FILE 'BIOSIS' ENTERED AT 13:33:02 ON 05 MAR 2007

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PROCESSING COMPLETED FOR L110

PROCESSING COMPLETED FOR L53

PROCESSING COMPLETED FOR L88

PROCESSING COMPLETED FOR L106

L111 7 DUP REM L110 L53 L88 L106 (4 DUPLICATES REMOVED)

ANSWERS '1-7' FROM FILE CAPLUS

=> d ibib abs hitind hitstr L111 1-7

L111 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2004:466352 CAPLUS Full-text

DOCUMENT NUMBER: 141:370387

TITLE: Potential use of 2-hydroxypropyl- $\beta$ -cyclodextrin as a release modifier of a water-soluble drug, metoprolol tartrate, from ethylcellulose tablets

AUTHOR(S): Ikeda, Y.; Motoune, S.; Ono, M.; Arima, H.; Hirayama, F.; Uekama, K.

CORPORATE SOURCE: Healthcare Research Institute, Wakunaga Pharmaceutical Co., Ltd., Koda-cho, Takata-gun, Hiroshima, 739-1195, Japan

SOURCE: Journal of Drug Delivery Science and Technology; (2004), 14(1), 69-76

CODEN: JDDSAL

PUBLISHER: Editions de Sante

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Drug release behavior was investigated for tablets of a ternary system in which metoprolol tartrate (Met)/2-hydroxypropyl- $\beta$ -cyclodextrin (HP- $\beta$ -CD) complexes with different molar ratios were dispersed in an ethylcellulose (EC) matrix. The release rate of Met from the tablets decreased due to the formation of the binary solid dispersion with EC and was further slowed down by dispersal of the Met/HP- $\beta$ -CD complex in the EC matrix. The release rate of Met decreased with the increase in contents of HP- $\beta$ -CyD in EC matrix up to (30/10)/60% weight/weight (Met/HP- $\beta$ -CD)/EC but further increases in HP- $\beta$ -CD content led to faster release rates. The anal. of the release rates by Korsmeyer's and Higuchi's equations and their temperature dependence suggested that Met is released according to a diffusion-controlled mechanism. Water penetration studies and microscopic observation suggested that the retarding effect of HP- $\beta$ -CD is attributable to a gel formation in small pores of the EC matrix. Moreover, the release rate of Met from the ternary (Met/HP- $\beta$ -CD)/EC ((30/10)/60% weight/weight) tablet was negligibly influenced by the pH of the dissoln. medium, paddle rotation rate, viscosity of the solution and storage conditions of the tablet. The results suggested that HP- $\beta$ -CD can work as a release rate-decelerating agent for Met when it is formulated in appropriate amts. in a hydrophobic EC matrix. Therefore, a combination of HP- $\beta$ -CD and EC may be useful for the controlled release of water-soluble drugs, and the release control can be tuned by adjusting the composition of components.

CC 63-6 (Pharmaceuticals)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L111 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2002:859272 CAPLUS Full-text

DOCUMENT NUMBER: 139:73854

TITLE: Inclusion complex formation of captopril with  $\alpha$ - and  $\beta$ -cyclodextrins in aqueous solution: NMR spectroscopic and molecular dynamic studies  
 AUTHOR(S): *Ikeda, Yoichi; Motoune, Sohko; Matsuoka, Toshikazu; Arima, Hidetoshi; Hirayama, Fumitoshi; Uekama, Kaneto*  
 CORPORATE SOURCE: Healthcare Research Institute, Wakunaga Pharmaceutical Co., Ltd., Hiroshima, 739-1195, Japan  
 SOURCE: Journal of Pharmaceutical Sciences (2002), 91(11), 2390-2398  
 CODEN: JPMSAE; ISSN: 0022-3549  
 PUBLISHER: Wiley-Liss, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The inclusion complex formation of  $\alpha$ -cyclodextrin ( $\alpha$ -CyD),  $\beta$ -cyclodextrin ( $\beta$ -CyD), and 2-hydroxylpropyl- $\beta$ -cyclodextrin (HP- $\beta$ -CD) with an angiotensin converting enzyme inhibitor, captopril, in aqueous solution was studied by  $^1$ H- and  $^{13}$ C-NMR spectroscopies, including ROESY and GROESY techniques, by kinetic methods and by mol. dynamic calcns. The oxidative degradation of captopril was markedly suppressed in  $\alpha$ -CyD solns., whereas  $\beta$ -CyD and HP- $\beta$ -CyD had negligible stabilizing effects. These NMR and kinetic results suggested that  $\alpha$ -CyD includes preferably the Pr thioalc. moiety of captopril, depositing the proline moiety outside the cavity. On the other hand,  $\beta$ -CyD includes a whole mol. of captopril in the cavity, locating the carboxylic acid within the cavity and the terminal thiol moiety outside the cavity. These inclusion structures were supported by mol. dynamic studies.

CC 63-5 (Pharmaceuticals)  
 REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L111 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:14260 CAPLUS Full-text  
 DOCUMENT NUMBER: 142:100421  
 TITLE: Stable liquid preparations of water-insoluble active ingredients  
 INVENTOR(S): *Ikeda, Yoichi; Motoune, Sohko; Ono, Mizuho; Mohri, Yoshifumi*  
 PATENT ASSIGNEE(S): Wakunaga Pharmaceutical Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 18 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 2005000358   | A1   | 20050106 | WO 2004-JP8990  | 20040625 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |          |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |

|                        |    |          |                |            |
|------------------------|----|----------|----------------|------------|
| US 2006124695          | A1 | 20060615 | US 2005-559778 | 20051207   |
| PRIORITY APPLN. INFO.: |    |          | JP 2003-184881 | A 20030627 |
|                        |    |          | WO 2004-JP8990 | W 20040625 |

AB A liquid preparation comprises a solution having a water content of 10 to 80 % and, incorporated therein, an active ingredient coated with a coating material containing a water-soluble cellulose derivative. The liquid preparation enables an ingredient unstable to water to be stably held therein, and can mask an unpleasant taste or odor. The liquid preparation is filled into hard capsules.

IC ICM A61K047-38  
ICS A61K009-08; A61K009-48; A61K035-78  
CC 63-6 (Pharmaceuticals)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L111 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:14196 CAPLUS Full-text  
 DOCUMENT NUMBER: 142:100405  
 TITLE: Hard capsules containing active agents in aqueous solutions  
 INVENTOR(S): *Motoune, Soko; Ikeda, Yoichi*  
 PATENT ASSIGNEE(S): Wakunaga Pharmaceutical Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 15 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 2005000279   | A1   | 20050106 | WO 2004-JP8988  | 20040625   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |            |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| EP 1645268  | A1   | 20060412 | EP 2004-746457  | 20040625   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK   |      |          |                 |            |
| US 2006153909   | A1   | 20060713 | US 2005-559519  | 20051206   |
| PRIORITY APPLN. INFO.:  |      |          | JP 2003-184866  | A 20030627 |
|   |      |          | WO 2004-JP8988  | W 20040625 |

AB Hard capsules having a solution containing an effective ingredient filled therein, are characterized in that the filled solution contains an inorg. chloride and exhibits a **water content** (w) satisfying the relationship  $10 < w \leq 80\%$  and a **water activity** value (a) satisfying the relationship  $0.50 \leq a \leq 0.90$  and that the capsule is comprised of a base containing a **cellulose** derivative. The hard capsules permit encapsulation of an inside solution of effective ingredient having a high **water content** in liquid form without detriment to the properties and stability of drug, etc. and the sensation of dosing or eating.

IC ICM A61K009-48  
ICS A61K047-38; A61K047-02; A61K035-78; A61K035-12; A61K035-66;  
A23L001-00

CC 63-6 (Pharmaceuticals)  
ST hard capsule **cellulose** ether **salt** drug **soln**  
IT **Drug delivery systems**  
    (**capsules**; hard **capsules** containing active agents in  
    **aqueous** solns.)  
IT Natural products, pharmaceutical  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
    (hard capsules containing active agents in **aqueous** solns.)  
IT Fermentation  
    (products; hard capsules containing active agents in **aqueous** solns.)  
IT 7647-14-5, Sodium chloride, biological studies 7786-30-3  
    , Magnesium chloride, biological studies 9004-62-0, Hydroxyethyl  
    **cellulose** 9004-64-2, Hydroxypropyl **cellulose**  
    9004-65-3, Hydroxypropyl methyl **cellulose**  
    9004-67-5, Methyl **cellulose** 10043-52-4,  
    Calcium chloride, biological studies  
    RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
    (hard capsules containing active agents in **aqueous** solns.)  
IT 7647-14-5, Sodium chloride, biological studies 7786-30-3  
    , Magnesium chloride, biological studies 9004-62-0, Hydroxyethyl  
    **cellulose** 9004-64-2, Hydroxypropyl **cellulose**  
    9004-65-3, Hydroxypropyl methyl **cellulose**  
    9004-67-5, Methyl **cellulose** 10043-52-4,  
    Calcium chloride, biological studies  
    RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
    (hard capsules containing active agents in **aqueous** solns.)  
RN 7647-14-5 CAPLUS  
CN Sodium chloride (NaCl) (9CI) (CA INDEX NAME)

Cl—Na

RN 7786-30-3 CAPLUS  
CN Magnesium chloride (MgCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl—Mg—Cl

RN 9004-62-0 CAPLUS  
CN Cellulose, 2-hydroxyethyl ether (CA INDEX NAME)

CM 1

CRN 9004-34-6  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 107-21-1  
CMF C<sub>2</sub> H<sub>6</sub> O<sub>2</sub>

HO—CH<sub>2</sub>—CH<sub>2</sub>—OH

RN 9004-64-2 CAPLUS  
CN Cellulose, 2-hydroxypropyl ether (CA INDEX NAME)

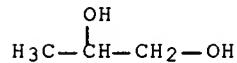
CM 1

CRN 9004-34-6  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 57-55-6  
CMF C<sub>3</sub> H<sub>8</sub> O<sub>2</sub>



RN 9004-65-3 CAPLUS  
CN Cellulose, 2-hydroxypropyl methyl ether (CA INDEX NAME)

CM 1

CRN 9004-34-6  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

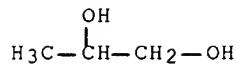
CM 2

CRN 67-56-1  
CMF C H<sub>4</sub> O

H<sub>3</sub>C—OH

CM 3

CRN 57-55-6  
CMF C<sub>3</sub> H<sub>8</sub> O<sub>2</sub>



RN 9004-67-5 CAPLUS  
 CN Cellulose, methyl ether (CA INDEX NAME)

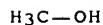
CM 1

CRN 9004-34-6  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 67-56-1  
 CMF C H4 O



RN 10043-52-4 CAPLUS  
 CN Calcium chloride (CaCl<sub>2</sub>) (9CI) (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L111 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2003:551409 CAPLUS Full-text  
 DOCUMENT NUMBER: 139:90499  
 TITLE: Pharmaceutical hard capsules  
 INVENTOR(S): *Motoune, Soko; Ikeda, Yoichi*  
 PATENT ASSIGNEE(S): Wakunaga Pharmaceutical Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 19 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.    | KIND  | DATE     | APPLICATION NO. | DATE     |
|---------------|---|----------|-----------------|----------|
| WO 2003057256 | A1  | 20030717 | WO 2002-JP13574 | 20021226 |
| W:            | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, |          |                 |          |

LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,  
 UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 AU 2002367423 A1 20030724 AU 2002-367423 20021226  
 EP 1459767 A1 20040922 EP 2002-790886 20021226  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK  
 US 2005112189 A1 20050526 US 2003-498982 20021226  
 PRIORITY APPLN. INFO.: JP 2001-400903 A 20011228  
 WO 2002-JP13574 W 20021226

AB Hard capsules have a solution containing an active ingredient enclosed therein, wherein the capsule film is made of a material containing a cellulose derivative and the moisture content (w) of the encapsulated solution and the water activity (a) thereof, resp. satisfy the following requirements:  $10 < w \leq 50\%$  and  $0.60 \leq a \leq 0.90$ . Thus, it becomes possible to provide hard capsules having a solution of an active ingredient with a high moisture content which is encapsulated therein as a liquid without deteriorating the properties and stability of a drug, etc. or altering the dosage characteristics or texture.

IC ICM A61K047-38

ICS A61K009-48; A61K047-32; A61K047-36; A61K035-78; A61P003-02

CC 63-6 (Pharmaceuticals)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L111 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2003:154281 CAPLUS Full-text  
 DOCUMENT NUMBER: 138:193301  
 TITLE: Sustained-release medicinal compositions containing drug complexes  
 INVENTOR(S): Uekama, Kaneto; Hirayama, Fumitoshi; **Ikeda, Yoichi; Motoune, Soko**  
 PATENT ASSIGNEE(S): Wakunaga Pharmaceutical Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 16 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 2003015824   | A1   | 20030227 | WO 2002-JP8011  | 20020806   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| JP 2005022975   | A    | 20050127 | JP 2001-242234  | 20010809   |
| PRIORITY APPLN. INFO.:  |      |          | JP 2001-242234  | A 20010809 |

AB Disclosed are medicinal compns. containing a complex of water-soluble drug with water-soluble cyclodextrin and a hydrophobic polymer. In such a composition, the water-soluble drug can be maintained in a stable state and the elution of the drug from the composition can be accurately controlled. Thus, preps. with the use of these medicinal compns. are useful as sustained-release preps. wherein the elution of the drug can be regulated and the drug effect can be exerted over a long period of time. In addition, the hydrophobic polymer can be blended and tabletted without granulation, which makes it possible to conveniently and safely produce sustained-release preps. Metoprolol tartrate inclusion complexes with hydroxypropyl  $\beta$ -cyclodextrin were prepared and formulated with Et cellulose for tablets.

IC ICM A61K047-40

ICS A61K009-20; A61K047-30; A61K047-32; A61K047-38

CC 63-6 (Pharmaceuticals)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L111 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:494983 CAPLUS Full-text

DOCUMENT NUMBER: 140:8583

TITLE: Effect of 2-hydroxypropyl- $\beta$ -cyclodextrin on release rate of metoprolol from ternary metoprolol/2-hydroxypropyl- $\beta$ -cyclodextrin/ethylcellulose tablets

AUTHOR(S): *Ikeda, Yoichi; Motoune, Sohko;*

Marumoto, Aya; Sonoda, Yoh; Hirayama, Fumitoshi;

Arima, Hidetoshi; Uekama, Kaneto

CORPORATE SOURCE: Healthcare Research Institute, Wakunaga Pharmaceutical Co. Ltd., Hiroshima, 739-1195, Japan

SOURCE: Journal of Inclusion Phenomena and Macrocyclic Chemistry (2002), Volume Date 2003, 44(1-4), 141-144

CODEN: JIPCF5; ISSN: 1388-3127

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The effect of 2-hydroxypropyl- $\beta$ -cyclodextrin (HP- $\beta$ -CyD) on the release of a water-soluble  $\beta$ 1-selective adrenoreceptor antagonist, metoprolol (Met), from ternary Met/HP- $\beta$ -CyD/ethylcellulose (EC) tablets was investigated. The release rate of Met from the ternary tablets was dependent on amts. of HP- $\beta$ -CyD in the tablets, i.e., the rate decreased when small amts. of HP- $\beta$ -CyD were added, while large amts. of HP- $\beta$ -CyD accelerated the rate. The slowest rate was observed for the tablet consisted of a 30/10/60 weight ratio of Met/HP- $\beta$ -CyD/EC. The analyses of the release rates by the Korsmeyer equation and their temperature dependence suggested that Met is released from the EC matrix containing HP- $\beta$ -CyD according to the diffusion-controlled mechanism. The water penetration studies and the micro- and macroscopic observations suggested that the retarding effect of HP- $\beta$ -CyD is attributable to a viscous gel formation in small pores on the surface of the tablets, where HP- $\beta$ -CyD gels may work as a barrier for the water penetration into the tablets and the release of the drug from the tablets. The in-vitro release property of the ternary tablets was reflected in the in-vivo absorption profile in dogs. The results indicated that a combination of HP- $\beta$ -CyD and EC is useful for the release control of water-soluble drugs such as Met.

CC 63-5 (Pharmaceuticals)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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I OR 7786-30-3/BI OR 9004-62-0/BI OR 9004-64-2/BI OR 9004-65-3/  
BI OR 9004-67-5/BI)  
L3 8522 SEA FILE=REGISTRY ABB=ON PLU=ON CELLULOSE/CNS  
L4 4 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND L3

L5 3 SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT L4  
L9 149363 SEA FILE=CAPLUS ABB=ON PLU=ON ?CAPSUL?/BI  
L10 227466 SEA FILE=CAPLUS ABB=ON PLU=ON DRUG DELIVERY SYSTEMS+OLD/CT  
L11 25392 SEA FILE=CAPLUS ABB=ON PLU=ON L10 (L) L9  
L22 1668122 SEA FILE=CAPLUS ABB=ON PLU=ON (THU OR BAC OR DMA OR PAC OR  
PKT)/RL  
L23 614 SEA FILE=CAPLUS ABB=ON PLU=ON (L4 (L) L22) AND (L5 (L) L22)  
L24 132 SEA FILE=CAPLUS ABB=ON PLU=ON L23 AND L11  
L25 93555 SEA FILE=CAPLUS ABB=ON PLU=ON (SALT OR SALINE)/BI (2A)  
SOLUTION?/BI  
L26 2 SEA FILE=CAPLUS ABB=ON PLU=ON L24 AND L25

=> d stat que L27

L2 7 SEA FILE=REGISTRY ABB=ON PLU=ON (10043-52-4/BI OR 7647-14-5/B  
I OR 7786-30-3/BI OR 9004-62-0/BI OR 9004-64-2/BI OR 9004-65-3/  
BI OR 9004-67-5/BI)  
L3 8522 SEA FILE=REGISTRY ABB=ON PLU=ON CELLULOSE/CNS  
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L5 3 SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT L4  
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L10 227466 SEA FILE=CAPLUS ABB=ON PLU=ON DRUG DELIVERY SYSTEMS+OLD/CT  
L11 25392 SEA FILE=CAPLUS ABB=ON PLU=ON L10 (L) L9  
L14 35968 SEA FILE=CAPLUS ABB=ON PLU=ON L4  
L20 187625 SEA FILE=CAPLUS ABB=ON PLU=ON L5  
L21 150 SEA FILE=CAPLUS ABB=ON PLU=ON L11 AND L14 AND L20  
L25 93555 SEA FILE=CAPLUS ABB=ON PLU=ON (SALT OR SALINE)/BI (2A)  
SOLUTION?/BI  
L27 2 SEA FILE=CAPLUS ABB=ON PLU=ON L21 AND L25

=> d stat que L30

L2 7 SEA FILE=REGISTRY ABB=ON PLU=ON (10043-52-4/BI OR 7647-14-5/B  
I OR 7786-30-3/BI OR 9004-62-0/BI OR 9004-64-2/BI OR 9004-65-3/  
BI OR 9004-67-5/BI)  
L3 8522 SEA FILE=REGISTRY ABB=ON PLU=ON CELLULOSE/CNS  
L4 4 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND L3  
L5 3 SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT L4  
L9 149363 SEA FILE=CAPLUS ABB=ON PLU=ON ?CAPSUL?/BI  
L10 227466 SEA FILE=CAPLUS ABB=ON PLU=ON DRUG DELIVERY SYSTEMS+OLD/CT  
L11 25392 SEA FILE=CAPLUS ABB=ON PLU=ON L10 (L) L9  
L22 1668122 SEA FILE=CAPLUS ABB=ON PLU=ON (THU OR BAC OR DMA OR PAC OR  
PKT)/RL  
L23 614 SEA FILE=CAPLUS ABB=ON PLU=ON (L4 (L) L22) AND (L5 (L) L22)  
L24 132 SEA FILE=CAPLUS ABB=ON PLU=ON L23 AND L11  
L29 1 SEA FILE=REGISTRY ABB=ON PLU=ON WATER/CN  
L30 3 SEA FILE=CAPLUS ABB=ON PLU=ON L24 AND L29

=> d stat que L33

L2 7 SEA FILE=REGISTRY ABB=ON PLU=ON (10043-52-4/BI OR 7647-14-5/B  
I OR 7786-30-3/BI OR 9004-62-0/BI OR 9004-64-2/BI OR 9004-65-3/  
BI OR 9004-67-5/BI)  
L3 8522 SEA FILE=REGISTRY ABB=ON PLU=ON CELLULOSE/CNS  
L4 4 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND L3  
L5 3 SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT L4  
L9 149363 SEA FILE=CAPLUS ABB=ON PLU=ON ?CAPSUL?/BI  
L10 227466 SEA FILE=CAPLUS ABB=ON PLU=ON DRUG DELIVERY SYSTEMS+OLD/CT  
L11 25392 SEA FILE=CAPLUS ABB=ON PLU=ON L10 (L) L9  
L12 414044 SEA FILE=CAPLUS ABB=ON PLU=ON ?CELLULOS?/BI

L22 1668122 SEA FILE=CAPLUS ABB=ON PLU=ON (THU OR BAC OR DMA OR PAC OR  
PKT)/RL  
L29 1 SEA FILE=REGISTRY ABB=ON PLU=ON WATER/CN  
L32 13 SEA FILE=CAPLUS ABB=ON PLU=ON (L5 (L) L22) AND (L29 (L) L22)  
AND L11  
L33 4 SEA FILE=CAPLUS ABB=ON PLU=ON L32 AND L12

=> d stat que L41

L2 7 SEA FILE=REGISTRY ABB=ON PLU=ON (10043-52-4/BI OR 7647-14-5/B  
I OR 7786-30-3/BI OR 9004-62-0/BI OR 9004-64-2/BI OR 9004-65-3/  
BI OR 9004-67-5/BI)  
L3 8522 SEA FILE=REGISTRY ABB=ON PLU=ON CELLULOSE/CNS  
L4 4 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND L3  
L5 3 SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT L4  
L9 149363 SEA FILE=CAPLUS ABB=ON PLU=ON ?CAPSUL?/BI  
L10 227466 SEA FILE=CAPLUS ABB=ON PLU=ON DRUG DELIVERY SYSTEMS+OLD/CT  
L11 25392 SEA FILE=CAPLUS ABB=ON PLU=ON L10 (L) L9  
L12 414044 SEA FILE=CAPLUS ABB=ON PLU=ON ?CELLULOS?/BI  
L13 205107 SEA FILE=CAPLUS ABB=ON PLU=ON L3  
L14 35968 SEA FILE=CAPLUS ABB=ON PLU=ON L4  
L15 4316 SEA FILE=CAPLUS ABB=ON PLU=ON ALKALI METAL CHLORIDES/CT  
L16 1210 SEA FILE=CAPLUS ABB=ON PLU=ON ALKALINE EARTH CHLORIDES/CT  
L17 623 SEA FILE=CAPLUS ABB=ON PLU=ON TRANSITION METAL CHLORIDES/CT  
L18 1156 SEA FILE=CAPLUS ABB=ON PLU=ON RARE EARTH CHLORIDES/CT  
L19 642 SEA FILE=CAPLUS ABB=ON PLU=ON INORGANIC CHLORID?/BI  
L20 187625 SEA FILE=CAPLUS ABB=ON PLU=ON L5  
L22 1668122 SEA FILE=CAPLUS ABB=ON PLU=ON (THU OR BAC OR DMA OR PAC OR  
PKT)/RL  
L25 93555 SEA FILE=CAPLUS ABB=ON PLU=ON (SALT OR SALINE)/BI (2A)  
SOLUTION?/BI  
L29 1 SEA FILE=REGISTRY ABB=ON PLU=ON WATER/CN  
L39 112 SEA FILE=CAPLUS ABB=ON PLU=ON L11 AND (L12 OR L13 OR L14)  
AND (L15 OR L16 OR L17 OR L18 OR L19 OR L20) AND (L29 OR  
WATER/BI OR AQUEOUS/BI OR L25)  
L41 5 SEA FILE=CAPLUS ABB=ON PLU=ON L39 AND (L29 (L) L22)

=> d stat que L42

L2 7 SEA FILE=REGISTRY ABB=ON PLU=ON (10043-52-4/BI OR 7647-14-5/B  
I OR 7786-30-3/BI OR 9004-62-0/BI OR 9004-64-2/BI OR 9004-65-3/  
BI OR 9004-67-5/BI)  
L3 8522 SEA FILE=REGISTRY ABB=ON PLU=ON CELLULOSE/CNS  
L4 4 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND L3  
L5 3 SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT L4  
L9 149363 SEA FILE=CAPLUS ABB=ON PLU=ON ?CAPSUL?/BI  
L10 227466 SEA FILE=CAPLUS ABB=ON PLU=ON DRUG DELIVERY SYSTEMS+OLD/CT  
L11 25392 SEA FILE=CAPLUS ABB=ON PLU=ON L10 (L) L9  
L12 414044 SEA FILE=CAPLUS ABB=ON PLU=ON ?CELLULOS?/BI  
L13 205107 SEA FILE=CAPLUS ABB=ON PLU=ON L3  
L14 35968 SEA FILE=CAPLUS ABB=ON PLU=ON L4  
L15 4316 SEA FILE=CAPLUS ABB=ON PLU=ON ALKALI METAL CHLORIDES/CT  
L16 1210 SEA FILE=CAPLUS ABB=ON PLU=ON ALKALINE EARTH CHLORIDES/CT  
L17 623 SEA FILE=CAPLUS ABB=ON PLU=ON TRANSITION METAL CHLORIDES/CT  
L18 1156 SEA FILE=CAPLUS ABB=ON PLU=ON RARE EARTH CHLORIDES/CT  
L19 642 SEA FILE=CAPLUS ABB=ON PLU=ON INORGANIC CHLORID?/BI  
L20 187625 SEA FILE=CAPLUS ABB=ON PLU=ON L5  
L21 150 SEA FILE=CAPLUS ABB=ON PLU=ON L11 AND L14 AND L20  
L22 1668122 SEA FILE=CAPLUS ABB=ON PLU=ON (THU OR BAC OR DMA OR PAC OR  
PKT)/RL

L23 614 SEA FILE=CAPLUS ABB=ON PLU=ON (L4 (L) L22) AND (L5 (L) L22)  
 L24 132 SEA FILE=CAPLUS ABB=ON PLU=ON L23 AND L11  
 L25 93555 SEA FILE=CAPLUS ABB=ON PLU=ON (SALT OR SALINE)/BI (2A)  
     SOLUTION?/BI  
 L26 2 SEA FILE=CAPLUS ABB=ON PLU=ON L24 AND L25  
 L27 2 SEA FILE=CAPLUS ABB=ON PLU=ON L21 AND L25  
 L29 1 SEA FILE=REGISTRY ABB=ON PLU=ON WATER/CN  
 L30 3 SEA FILE=CAPLUS ABB=ON PLU=ON L24 AND L29  
 L32 13 SEA FILE=CAPLUS ABB=ON PLU=ON (L5 (L) L22) AND (L29 (L) L22)  
     AND L11  
 L33 4 SEA FILE=CAPLUS ABB=ON PLU=ON L32 AND L12  
 L36 7 SEA FILE=CAPLUS ABB=ON PLU=ON L26 OR L27 OR L30 OR L33  
 L39 112 SEA FILE=CAPLUS ABB=ON PLU=ON L11 AND (L12 OR L13 OR L14)  
     AND (L15 OR L16 OR L17 OR L18 OR L19 OR L20) AND (L29 OR  
     WATER/BI OR AQUEOUS/BI OR L25)  
 L40 105 SEA FILE=CAPLUS ABB=ON PLU=ON L39 NOT L36  
 L42 3 SEA FILE=CAPLUS ABB=ON PLU=ON L25 AND L40

=> d stat que L47

L2 7 SEA FILE=REGISTRY ABB=ON PLU=ON (10043-52-4/BI OR 7647-14-5/B  
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     BI OR 9004-67-5/BI)  
 L3 8522 SEA FILE=REGISTRY ABB=ON PLU=ON CELLULOSE/CNS  
 L4 4 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND L3  
 L5 3 SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT L4  
 L9 149363 SEA FILE=CAPLUS ABB=ON PLU=ON ?CAPSUL?/BI  
 L10 227466 SEA FILE=CAPLUS ABB=ON PLU=ON DRUG DELIVERY SYSTEMS+OLD/CT  
 L11 25392 SEA FILE=CAPLUS ABB=ON PLU=ON L10 (L) L9  
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 L13 205107 SEA FILE=CAPLUS ABB=ON PLU=ON L3  
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 L20 187625 SEA FILE=CAPLUS ABB=ON PLU=ON L5  
 L22 1668122 SEA FILE=CAPLUS ABB=ON PLU=ON (THU OR BAC OR DMA OR PAC OR  
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 L25 93555 SEA FILE=CAPLUS ABB=ON PLU=ON (SALT OR SALINE)/BI (2A)  
     SOLUTION?/BI  
 L29 1 SEA FILE=REGISTRY ABB=ON PLU=ON WATER/CN  
 L43 79 SEA FILE=CAPLUS ABB=ON PLU=ON L11 AND (L12 OR L13 OR L14)  
     AND ((L15 OR L16 OR L17 OR L18 OR L19 OR L20) (L) L22) AND  
     (L29 OR WATER/BI OR AQUEOUS/BI OR L25)  
 L46 10415 SEA FILE=CAPLUS ABB=ON PLU=ON WATER/BI (1A) ACTIVIT?/BI  
 L47 2 SEA FILE=CAPLUS ABB=ON PLU=ON L43 AND L46

=> d stat que L48

L2 7 SEA FILE=REGISTRY ABB=ON PLU=ON (10043-52-4/BI OR 7647-14-5/B  
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     BI OR 9004-67-5/BI)  
 L3 8522 SEA FILE=REGISTRY ABB=ON PLU=ON CELLULOSE/CNS  
 L4 4 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND L3  
 L5 3 SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT L4  
 L9 149363 SEA FILE=CAPLUS ABB=ON PLU=ON ?CAPSUL?/BI  
 L10 227466 SEA FILE=CAPLUS ABB=ON PLU=ON DRUG DELIVERY SYSTEMS+OLD/CT  
 L11 25392 SEA FILE=CAPLUS ABB=ON PLU=ON L10 (L) L9

L12 414044 SEA FILE=CAPLUS ABB=ON PLU=ON ?CELLULOS?/BI  
 L13 205107 SEA FILE=CAPLUS ABB=ON PLU=ON L3  
 L14 35968 SEA FILE=CAPLUS ABB=ON PLU=ON L4  
 L15 4316 SEA FILE=CAPLUS ABB=ON PLU=ON ALKALI METAL CHLORIDES/CT  
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 L22 1668122 SEA FILE=CAPLUS ABB=ON PLU=ON (THU OR BAC OR DMA OR PAC OR  
     PKT)/RL  
 L25 93555 SEA FILE=CAPLUS ABB=ON PLU=ON (SALT OR SALINE)/BI (2A)  
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 L29 1 SEA FILE=REGISTRY ABB=ON PLU=ON WATER/CN  
 L43 79 SEA FILE=CAPLUS ABB=ON PLU=ON L11 AND (L12 OR L13 OR L14)  
     AND ((L15 OR L16 OR L17 OR L18 OR L19 OR L20) (L) L22) AND  
     (L29 OR WATER/BI OR AQUEOUS/BI OR L25)  
 L48 5 SEA FILE=CAPLUS ABB=ON PLU=ON L43 AND L25

=> d stat que L50

L2 7 SEA FILE=REGISTRY ABB=ON PLU=ON (10043-52-4/BI OR 7647-14-5/B  
     I OR 7786-30-3/BI OR 9004-62-0/BI OR 9004-64-2/BI OR 9004-65-3/  
     BI OR 9004-67-5/BI)  
 L3 8522 SEA FILE=REGISTRY ABB=ON PLU=ON CELLULOSE/CNS  
 L4 4 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND L3  
 L5 3 SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT L4  
 L9 149363 SEA FILE=CAPLUS ABB=ON PLU=ON ?CAPSUL?/BI  
 L10 227466 SEA FILE=CAPLUS ABB=ON PLU=ON DRUG DELIVERY SYSTEMS+OLD/CT  
 L11 25392 SEA FILE=CAPLUS ABB=ON PLU=ON L10 (L) L9  
 L12 414044 SEA FILE=CAPLUS ABB=ON PLU=ON ?CELLULOS?/BI  
 L13 205107 SEA FILE=CAPLUS ABB=ON PLU=ON L3  
 L14 35968 SEA FILE=CAPLUS ABB=ON PLU=ON L4  
 L15 4316 SEA FILE=CAPLUS ABB=ON PLU=ON ALKALI METAL CHLORIDES/CT  
 L16 1210 SEA FILE=CAPLUS ABB=ON PLU=ON ALKALINE EARTH CHLORIDES/CT  
 L17 623 SEA FILE=CAPLUS ABB=ON PLU=ON TRANSITION METAL CHLORIDES/CT  
 L18 1156 SEA FILE=CAPLUS ABB=ON PLU=ON RARE EARTH CHLORIDES/CT  
 L19 642 SEA FILE=CAPLUS ABB=ON PLU=ON INORGANIC CHLORID?/BI  
 L20 187625 SEA FILE=CAPLUS ABB=ON PLU=ON L5  
 L22 1668122 SEA FILE=CAPLUS ABB=ON PLU=ON (THU OR BAC OR DMA OR PAC OR  
     PKT)/RL  
 L25 93555 SEA FILE=CAPLUS ABB=ON PLU=ON (SALT OR SALINE)/BI (2A)  
     SOLUTION?/BI  
 L29 1 SEA FILE=REGISTRY ABB=ON PLU=ON WATER/CN  
 L43 79 SEA FILE=CAPLUS ABB=ON PLU=ON L11 AND (L12 OR L13 OR L14)  
     AND ((L15 OR L16 OR L17 OR L18 OR L19 OR L20) (L) L22) AND  
     (L29 OR WATER/BI OR AQUEOUS/BI OR L25)  
 L50 17 SEA FILE=CAPLUS ABB=ON PLU=ON L43 AND EXTRACT?/BI

=> s (L26 or L27 or L30 or L33 or L41 or L42 or L47 or L48 or L50) not L110  
 L112 26 (L26 OR L27 OR L30 OR L33 OR L41 OR L42 OR L47 OR L48 OR L50)  
     NOT L110

=> file medline  
 FILE 'MEDLINE' ENTERED AT 13:34:51 ON 05 MAR 2007

FILE LAST UPDATED: 3 Mar 2007 (20070303/UP). FILE COVERS 1950 TO DATE.

All regular MEDLINE updates from November 15 to December 16 have been

added to MEDLINE, along with 2007 Medical Subject Headings (MeSH(R)) and 2007 tree numbers.

The annual reload will be available in early 2007.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d stat que L67

L2 7 SEA FILE=REGISTRY ABB=ON PLU=ON (10043-52-4/BI OR 7647-14-5/B  
I OR 7786-30-3/BI OR 9004-62-0/BI OR 9004-64-2/BI OR 9004-65-3/  
BI OR 9004-67-5/BI)  
L3 8522 SEA FILE=REGISTRY ABB=ON PLU=ON CELLULOSE/CNS  
L4 4 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND L3  
L54 82526 SEA FILE=MEDLINE ABB=ON PLU=ON ?CAPSUL?  
L55 6771 SEA FILE=MEDLINE ABB=ON PLU=ON CAPSULES/CT  
L56 49650 SEA FILE=MEDLINE ABB=ON PLU=ON SODIUM CHLORIDE  
L57 2701 SEA FILE=MEDLINE ABB=ON PLU=ON MAGNESIUM CHLORIDE  
L58 7001 SEA FILE=MEDLINE ABB=ON PLU=ON CALCIUM CHLORIDE  
L59 98118 SEA FILE=MEDLINE ABB=ON PLU=ON CHLORIDES+NT/CT  
L60 58826 SEA FILE=MEDLINE ABB=ON PLU=ON ?CELLULOS?  
L61 3263 SEA FILE=MEDLINE ABB=ON PLU=ON L4  
L62 367309 SEA FILE=MEDLINE ABB=ON PLU=ON WATER  
L67 9 SEA FILE=MEDLINE ABB=ON PLU=ON (L54 OR L55) AND (L56 OR L57  
OR L58 OR L59) AND (L60 OR L61) AND L62

=> d stat que L86

L2 7 SEA FILE=REGISTRY ABB=ON PLU=ON (10043-52-4/BI OR 7647-14-5/B  
I OR 7786-30-3/BI OR 9004-62-0/BI OR 9004-64-2/BI OR 9004-65-3/  
BI OR 9004-67-5/BI)  
L3 8522 SEA FILE=REGISTRY ABB=ON PLU=ON CELLULOSE/CNS  
L4 4 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND L3  
L54 82526 SEA FILE=MEDLINE ABB=ON PLU=ON ?CAPSUL?  
L55 6771 SEA FILE=MEDLINE ABB=ON PLU=ON CAPSULES/CT  
L56 49650 SEA FILE=MEDLINE ABB=ON PLU=ON SODIUM CHLORIDE  
L57 2701 SEA FILE=MEDLINE ABB=ON PLU=ON MAGNESIUM CHLORIDE  
L58 7001 SEA FILE=MEDLINE ABB=ON PLU=ON CALCIUM CHLORIDE  
L59 98118 SEA FILE=MEDLINE ABB=ON PLU=ON CHLORIDES+NT/CT  
L60 58826 SEA FILE=MEDLINE ABB=ON PLU=ON ?CELLULOS?  
L61 3263 SEA FILE=MEDLINE ABB=ON PLU=ON L4  
L62 367309 SEA FILE=MEDLINE ABB=ON PLU=ON WATER  
L63 1169 SEA FILE=MEDLINE ABB=ON PLU=ON WATER ACTIVIT?  
L64 73275 SEA FILE=MEDLINE ABB=ON PLU=ON AQUEOUS  
L65 181831 SEA FILE=MEDLINE ABB=ON PLU=ON EXTRACT  
L66 356191 SEA FILE=MEDLINE ABB=ON PLU=ON EXTRACT?  
L79 23 SEA FILE=MEDLINE ABB=ON PLU=ON (L54 OR L55) AND (L56 OR L57  
OR L58 OR L59) AND (L60 OR L61)  
L86 15 SEA FILE=MEDLINE ABB=ON PLU=ON L79 AND ((L62 OR L63 OR L64  
OR L65 OR L66) OR SALT OR SAILIN? OR SOLUTION?)

=> s L67 or L86

L113 15 L67 OR L86

=> file embase

FILE 'EMBASE' ENTERED AT 13:35:15 ON 05 MAR 2007  
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FILE COVERS 1974 TO 5 Mar 2007 (20070305/ED)

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> d stat que L95
L56      49650 SEA FILE=MEDLINE ABB=ON  PLU=ON  SODIUM CHLORIDE
L57      2701 SEA FILE=MEDLINE ABB=ON  PLU=ON  MAGNESIUM CHLORIDE
L58      7001 SEA FILE=MEDLINE ABB=ON  PLU=ON  CALCIUM CHLORIDE
L89      80395 SEA FILE=EMBASE ABB=ON  PLU=ON  ?CAPSUL?
L90      68198 SEA FILE=EMBASE ABB=ON  PLU=ON  (L56 OR L57 OR L58)
L91      191889 SEA FILE=EMBASE ABB=ON  PLU=ON  CHLORIDE?
L92      43712 SEA FILE=EMBASE ABB=ON  PLU=ON  ?CELLULOS?
L93      110 SEA FILE=EMBASE ABB=ON  PLU=ON  L89 AND (L90 OR L91) AND L92
L94      50953 SEA FILE=EMBASE ABB=ON  PLU=ON  WATER/CT
L95      7 SEA FILE=EMBASE ABB=ON  PLU=ON  L93 AND L94
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```
=> d stat que L105
L56      49650 SEA FILE=MEDLINE ABB=ON  PLU=ON  SODIUM CHLORIDE
L57      2701 SEA FILE=MEDLINE ABB=ON  PLU=ON  MAGNESIUM CHLORIDE
L58      7001 SEA FILE=MEDLINE ABB=ON  PLU=ON  CALCIUM CHLORIDE
L89      80395 SEA FILE=EMBASE ABB=ON  PLU=ON  ?CAPSUL?
L90      68198 SEA FILE=EMBASE ABB=ON  PLU=ON  (L56 OR L57 OR L58)
L91      191889 SEA FILE=EMBASE ABB=ON  PLU=ON  CHLORIDE?
L92      43712 SEA FILE=EMBASE ABB=ON  PLU=ON  ?CELLULOS?
L93      110 SEA FILE=EMBASE ABB=ON  PLU=ON  L89 AND (L90 OR L91) AND L92
L96      22 SEA FILE=EMBASE ABB=ON  PLU=ON  L93 AND WATER
L98      22 SEA FILE=EMBASE ABB=ON  PLU=ON  L93 AND AQUEOUS
L105     11 SEA FILE=EMBASE ABB=ON  PLU=ON  L96 AND L98
```

```
=> s (L95 or L105) not L88
L114      14 (L95 OR L105) NOT L88
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```
=> file emdline
'EMDLINE' IS NOT A VALID FILE NAME
SESSION CONTINUES IN FILE 'EMBASE'
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files
that are available. If you have requested multiple files, you can
specify a corrected file name or you can enter "IGNORE" to continue
accessing the remaining file names entered.
```

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=> file medline
FILE 'MEDLINE' ENTERED AT 13:35:50 ON 05 MAR 2007
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FILE LAST UPDATED: 3 Mar 2007 (20070303/UP). FILE COVERS 1950 TO DATE.

All regular MEDLINE updates from November 15 to December 16 have been added to MEDLINE, along with 2007 Medical Subject Headings (MeSH(R)) and 2007 tree numbers.

The annual reload will be available in early 2007.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> s L113 not L53
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L115 15 L113 NOT L53

=> file biosis  
FILE 'BIOSIS' ENTERED AT 13:36:26 ON 05 MAR 2007  
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FILE COVERS 1969 TO DATE.  
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 28 February 2007 (20070228/ED)

=> d stat que L108  
L56 49650 SEA FILE=MEDLINE ABB=ON PLU=ON SODIUM CHLORIDE  
L57 2701 SEA FILE=MEDLINE ABB=ON PLU=ON MAGNESIUM CHLORIDE  
L58 7001 SEA FILE=MEDLINE ABB=ON PLU=ON CALCIUM CHLORIDE  
L89 80395 SEA FILE=EMBASE ABB=ON PLU=ON ?CAPSUL?  
L90 68198 SEA FILE=EMBASE ABB=ON PLU=ON (L56 OR L57 OR L58)  
L91 191889 SEA FILE=EMBASE ABB=ON PLU=ON CHLORIDE?  
L92 43712 SEA FILE=EMBASE ABB=ON PLU=ON ?CELLULOS?  
L107 71 SEA FILE=BIOSIS ABB=ON PLU=ON L89 AND (L90 OR L91) AND L92  
L108 21 SEA FILE=BIOSIS ABB=ON PLU=ON L107 AND WATER

=> s l108 not L106  
L116 21 L108 NOT L106

=> dup rem L112 L115 L114 L116  
FILE 'CAPLUS' ENTERED AT 13:37:03 ON 05 MAR 2007  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'MEDLINE' ENTERED AT 13:37:03 ON 05 MAR 2007

FILE 'EMBASE' ENTERED AT 13:37:03 ON 05 MAR 2007  
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FILE 'BIOSIS' ENTERED AT 13:37:03 ON 05 MAR 2007  
Copyright (c) 2007 The Thomson Corporation  
PROCESSING COMPLETED FOR L112  
PROCESSING COMPLETED FOR L115  
PROCESSING COMPLETED FOR L114  
PROCESSING COMPLETED FOR L116  
L117 62 DUP REM L112 L115 L114 L116 (14 DUPLICATES REMOVED)  
ANSWERS '1-26' FROM FILE CAPLUS  
ANSWERS '27-41' FROM FILE MEDLINE  
ANSWERS '42-53' FROM FILE EMBASE  
ANSWERS '54-62' FROM FILE BIOSIS

=> d ibib abs hitind L117 1-26; d iall L117 27-62

L117 ANSWER 1 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2007:73054 CAPLUS Full-text  
TITLE: Chinese medicine composition for treating  
gynecological inflammation and its preparation  
INVENTOR(S): Jin, Xing; Tang, Lei; Fang, Jinian; Wang, Yan; Zhu,  
Yifeng  
PATENT ASSIGNEE(S): Shanghai Cirui Pharmaceutical Science and Technology

SOURCE: Co., Ltd., Peop. Rep. China  
 Faming Zhuanli Shenqing Gongkai Shuomingshu, 9pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO.  | DATE     |
|------------------------|------|----------|------------------|----------|
| CN 1895361             | A    | 20070117 | CN 2006-10027752 | 20060619 |
| PRIORITY APPLN. INFO.: |      |          | CN 2006-10027752 | 20060619 |

AB The medical composition in dosage form of tablet, capsule, dripping pill, granule, injection, suppository, effervescent tablet and transdermal preparation is prepared from Ajuga decumbens 1-5, Eucalyptus leaf 2-6 and Lonicera japonica flower 1-4 part, by preparing volatile oil from Ajuga decumbens and Eucalyptus leaf by CO<sub>2</sub> supercrit. **extraction** or steam distillation, preparing Lonicera japonica **extract** by **water** or ethanol **extraction**, mixing the above volatile oil with Lonicera japonica **extract** to obtain total **extractive**, the mixing with polyethylene glycol 6000 at a ratio of 1:2-5, heating to 85-95°, dropping in coolant di-Me silicone oil, removing coolant to obtain dripping pill; dissolving total **extractive** in injection **water**, adding sodium chloride and Tween 80, stirring, filtrating and sterilizing to obtain injection solution; mixing total **extractive** with Tween 80 and semisynthesized glyceride, heating, forming in mold, cooling to obtain suppository; adding starch, sodium CM-**cellulose** and β-cyclodextrin to total **extractive**, mixing, pelletizing and tabletting to obtain tablet; mixing total **extractive** with sodium carboxymethyl starch, pelletizing and encapsulating to obtain capsule. The inventive product is used for treating gynecol. inflammation, such as pelvic inflammation, cervicitis, salpingitis, vulvitis and vaginitis with advantages of remarkable therapeutic effect and no adverse effect.

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

IT **Drug delivery systems**

(capsules; Chinese medicine composition for treating gynecol. inflammation and its preparation)

IT **Extraction**

(supercrit.; Chinese medicine composition for treating gynecol.

inflammation

and its preparation)

IT 7585-39-9, β-Cyclodextrin **7647-14-5**, Sodium chloride

**9004-32-4**, Sodium carboxymethyl **cellulose** 9005-25-8,

Starch 9005-65-6, Tween-80 9063-38-1, Sodium carboxymethyl starch

25322-68-3, Polyethylene glycol

RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)

(Chinese medicine composition for treating gynecol. inflammation and its preparation)

L117 ANSWER 2 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:322591 CAPLUS Full-text

DOCUMENT NUMBER: 144:357728

TITLE: Solid pharmaceutical formulations comprising diacerein and meloxicam

INVENTOR(S): Garcia Armenta, Maria Elena; Santos Murillo, Josefina; Alvarez Ochoa, Victor Guillermo; Flores Mendoza, Consuelo

PATENT ASSIGNEE(S): Espinosa Abdala, Leopoldo, Mex.

SOURCE: U.S. Pat. Appl. Publ., 10 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| US 2006074079   | A1   | 20060406 | US 2005-186031  | 20050930 |
| EP 1655026  | A1   | 20060510 | EP 2005-76453   | 20050622 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK,<br>BA, HR, IS, YU |      |          |                 |          |

PRIORITY APPLN. INFO.: MX 2004-PA9698 A 20041004

AB This invention relates to formulations in solid pharmaceutical forms containing diacerein and meloxicam. The present invention provides novel formulations comprising: (a) Diacerein, (b) Meloxicam, (c) one or more anti-adherent agents, (d) one or more disintegrating agents, (e) one or more binder agents, (f) one or more lubricants, (g) one or more diluents, (h) one or more solvents, and (i) any other additive which assists in formulation. The present invention also provides a method for treatment of osteoarthritis, rheumatoid arthritis, gouty arthritis, multiple sclerosis, amyotrophic lateral sclerosis and related diseases, in addition of inflammatory processes originated from various etiologies, by administering suitable doses.

INCL 514226500; 514569000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

IT **Drug delivery systems**

(capsules; solid pharmaceutical formulations comprising diacereine and meloxicam)

IT 57-11-4, Stearic acid, biological studies 57-50-1, Sucrose, biological studies 63-42-3, Lactose 69-65-8, Mannitol 79-41-4D, Methacrylic acid, derivs. 557-04-0, Magnesium stearate 7778-18-9, Calcium sulfate 9000-65-1, Tragacanth 9002-89-5, Polyvinyl alcohol 9003-39-8, Polyvidone 9004-34-6, Cellulose, biological studies 9004-67-5, Methylcellulose 9005-25-8, Corn starch, biological studies 9005-32-7, Alginic acid 9063-38-1, Sodium starch glycolate 10043-52-4, Calcium chloride, biological studies 10103-46-5, Calcium phosphate 14807-96-6, Talc, biological studies 74811-65-7, Croscarmellose sodium

RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(solid pharmaceutical formulations comprising diacereine and meloxicam)

IT 50-70-4, Sorbitol, uses 56-81-5, Glycerol, uses 57-55-6, Propylene glycol, uses 64-17-5, Ethanol, uses 110-27-0, Isopropyl myristate 7732-18-5, Water, uses 25322-68-3, Polyethylene glycol

RL: NUU (Other use, unclassified); USES (Uses)

(solvent; solid pharmaceutical formulations comprising diacereine and meloxicam)

L117 ANSWER 3 OF 62 CAPIUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:5966 CAPIUS Full-text

DOCUMENT NUMBER: 146:128589

TITLE: Chinese medicinal compositions for treating gynecologic inflammation

INVENTOR(S): Jin, Xing; Zhu, Gaofeng; Tang, Lei; Zhu, Yifeng

PATENT ASSIGNEE(S): Shanghai Cirui Pharmaceutical Science and Technology Co., Ltd., Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 9pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.                | KIND  | DATE     | APPLICATION NO.  | DATE     |
|---------------------------|---|----------|------------------|----------|
| CN 1883607                | A   | 20061227 | CN 2006-10026797 | 20060523 |
| PRIORITY APPLN. INFO.:    |   |          |                  |          |
| CN 2006-10026797 20060523 |   |          |                  |          |
| AB                        | The composition is produced from <i>Houttuynia cordata</i> 2-6, <i>Eucalyptus</i> leaf 2-6, <i>Lonicera japonica</i> 1-4 weight parts. Dosage form of composition is tablet, capsule, dripping pill, granule, injection, suppository, transdermal, etc. The title composition is produced by pulverizing <i>Houttuynia cordata</i> and <i>eucalyptus</i> leaf, supercrit. <b>extracting</b> with CO <sub>2</sub> at 20-30 MPa and 35-40 °C for 60-80 min to obtain volatile oil A, or steam distilling to obtain volatile oil B; decocting <i>Lonicera japonica</i> in <b>water</b> twice each for 1 h, centrifuging, vacuum concentrating supernatant at (-0.2)-(-0.9) MPa, spray or vacuum drying to obtain <i>Lonicera japonica</i> <b>extract</b> C, or <b>extracting</b> <i>Lonicera japonica</i> with 60-80% ethanol twice each for 2 h, filtrating, concentrating and drying to obtain <i>Lonicera japonica</i> <b>extract</b> D; mixing A or B with C or D to obtain <b>extractive</b> E, then mixing with PEG 6000 at a ratio of 1:2-5, heating to 85-95 °C, dropping to obtain dripping pills; dissolving E in injection <b>water</b> , centrifuging to obtain supernatant, adding sodium chloride and Tween-80, freezing, centrifuging, ultrafiltering, canning and sterilizing to obtain injection solution; or mixing E with Tween-80 and semisynthesized glyceride, heating, shaping in mold, cooling to obtain suppository; or mixing E with starch, sodium CM- <b>cellulose</b> and β-cyclodextrin, pelletizing and tabletting to obtain tablet; or mixing E with sodium carboxymethyl starch, pelletizing and encapsulating to obtain capsule. The inventive product has advantages of high therapeutic effect and no adverse effect for treating gynecol. inflammation, such as pelvic inflammation, cervicitis, salpingitis, vulvitis and vaginitis. |          |                  |          |
| CC                        | 63-6 (Pharmaceuticals)  |          |                  |          |
| IT                        | Section cross-reference(s): 1   |          |                  |          |
| IT                        | <b>Drug delivery systems</b><br>( <b>capsules</b> ; Chinese medicinal compns. for treating gynecol. inflammation)   |          |                  |          |
| IT                        | <b>Extraction</b><br>(supercrit.; Chinese medicinal compns. for treating gynecol. inflammation)   |          |                  |          |
| IT                        | 7585-39-9, β-Cyclodextrin 7647-14-5, Sodium chloride, biological studies 9004-32-4, Sodium carboxymethyl <b>cellulose</b> 9005-25-8, Starch, biological studies 9005-65-6, Tween-80 9016-00-6, Poly[oxy(dimethylsilylene)] 9063-38-1, Sodium carboxymethyl starch 25322-68-3, Polyethylene glycol<br>RL: <b>THU (Therapeutic use)</b> ; BIOL (Biological study); USES (Uses)<br>(Chinese medicinal compns. for treating gynecol. inflammation)  |          |                  |          |

L117 ANSWER 4 OF 62 CAPIUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1351102 CAPIUS Full-text

DOCUMENT NUMBER: 146:128534

TITLE: Pharmaceutical composition of polypeptide oral sustained-release microcapsule and method for its preparation thereof

INVENTOR(S): Dai, Zhifei; Yue, Xiuli; Xing, Lei

PATENT ASSIGNEE(S): Harbin Institute of Technology, Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 9pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND  | DATE     | APPLICATION NO.                      | DATE                 |
|------------------------|---|----------|--------------------------------------|----------------------|
| CN 1879610             | A   | 20061220 | CN 2006-10009893<br>CN 2006-10009893 | 20060403<br>20060403 |
| PRIORITY APPLN. INFO.: |   |          |                                      |                      |
| AB                     | The present invention relates to pharmaceutical composition of polypeptide oral sustained-release microcapsule and method for its preparation thereof. Specifically, the method consists of the following steps of (1) adsorbing polypeptide drug with 0.01-10 M acidic solution(pH 1-6) containing 0.01-100 mg/mL polyanion; (2) centrifugating or filtering to remove unabsorbed polyanion, washing with 0.01-10 M salt solution(pH 1-6) for some times and 0.1-100 min every time; (3) adsorbing with said concentration polycation; (4) removing polycation with above method; steps of (1) and (2); and sequential repeating steps of (1), (2), (3) and (4). The salt is sodium chloride, ammonium chloride, etc. The polyanion is sodium polystyrene sulfonate, sodium polyacrylate, etc., and the polycation is chitosan, collagen, etc. The polypeptide is insulin, interferon, protamines, etc.  |          |                                      |                      |
| CC                     | 63-6 (Pharmaceuticals)  |          |                                      |                      |
| IT                     | <b>Drug delivery systems</b><br>(microcapsules, sustained-release; pharmaceutical composition of polypeptide oral sustained-release <b>microcapsule</b> and method for its preparation thereof)   |          |                                      |                      |
| IT                     | <b>Drug delivery systems</b><br>(microcapsules; pharmaceutical composition of polypeptide oral sustained-release <b>microcapsule</b> and method for its preparation thereof)  |          |                                      |                      |
| IT                     | <b>Drug delivery systems</b><br>(oral; pharmaceutical composition of polypeptide oral sustained-release <b>microcapsule</b> and method for its preparation thereof)   |          |                                      |                      |
| IT                     | 7447-40-7, Potassium chloride, biological studies 7632-05-5, Sodium phosphate 7647-14-5, Sodium chloride, biological studies<br>7757-82-6, Sodium sulphate 7778-80-5, Potassium sulphate 7783-20-2, Ammonium sulphate 9003-04-7, Sodium polyacrylate 9004-32-4, Sodium carboxymethyl <b>cellulose</b> 9004-34-6, <b>Cellulose</b> , biological studies 9004-54-0D, Dextran, cationic derivative 9004-61-9, Hyaluronic acid 9005-38-3, Sodium alginate 9012-76-4, Chitosan 9042-14-2, Dextran sulphate 9080-79-9 12125-02-9, Ammonium chloride, biological studies 16068-46-5, Potassium phosphate 16072-57-4D, Diphenylamine-4-diazonium, substituted 24937-47-1, Polyarginine 25087-26-7, Polymethacrylic acid 25104-18-1, Polylysine 25212-18-4, Polyarginine 38000-06-5, Polylysine<br>RL: <b>THU (Therapeutic use)</b> ; BIOL (Biological study); USES (Uses)<br>(pharmaceutical composition of polypeptide oral sustained-release microcapsule and method for its preparation thereof) |          |                                      |                      |

L117 ANSWER 5 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2006:907335 CAPLUS Full-text  
 DOCUMENT NUMBER: 145:342376  
 TITLE: Antiseptic and anti-inflammatory chinese patent preparation and its quality control  
 INVENTOR(S): Wang, Hengxin  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 20pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

CN 1823897 A 20060830 CN 2005-10032579 20051220  
PRIORITY APPLN. INFO.: CN 2005-10032579 20051220

AB The preparation is tanshinone pill or tanshinone dripping pill or enteric dripping pill or micropill capsule or disperse tablet or granule or enteric granule or effervescent granules. The preparation process comprises **extracting** *Salvia miltiorrhiza*, adding proper adjuvant and preparing tanshinone pill or tanshinone dripping pill or enteric dripping pill or micropill capsule or disperse tablet or granule or enteric granule or effervescent granules; or adding proper adjuvant, pelleting, drying, coating or uncoating. The adjuvant is lactose, starch, sodium carboxymethyl starch, pregelatinized starch, sucrose, glucose, mannite, sorbitol, syrup, microcryst. **cellulose**, Me **cellulose**, CM-**cellulose**, Et **cellulose**, hydroxypropyl Me **cellulose**, low-substituted hydroxypropyl **cellulose**, calcium CM-**cellulose**, calcium sulfate, calcium hydrogen phosphate, calcium phosphate, calcium carbonate, light magnesium oxide, talc powder, differential silica gel, aluminum hydroxide, boric acid, sodium chloride, dextrin, magnesium stearate, hydrogenated vegetable oil, and polyethylene glycol. The content of tanshinone IIA in the Chinese patent medicine is determined by HPLC scanning from 260 nm to 280 nm on C18 column with acetonitrile-water (65-75:20-35) as mobile phase. The patent product has high bioavailability, good controllability and stability, so it is beneficial for increasing curative effect.

CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 1

IT **Drug delivery systems**  
(**capsules**; antiseptic and anti-inflammatory chinese patent preparation and its quality control)

IT 50-70-4, Sorbitol, biological studies 50-99-7, Glucose, biological studies 56-81-5, Glycerol, biological studies 57-11-4, Stearic acid, biological studies 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 57-55-6, Propylene glycol, biological studies 63-42-3, Lactose 69-65-8, Mannite 77-92-9, Citric acid, biological studies 81-25-4, Cholic acid 87-69-4, Tartaric acid, biological studies 87-99-0, Xylitol 88-99-3, 1,2-Benzenedicarboxylic acid, biological studies 110-15-6, Succinic acid, biological studies 110-17-8, Fumaric acid, biological studies 128-44-9, Saccharin sodium 144-55-8, Sodium bicarbonate, biological studies 151-21-3, Sodium dodecylsulfate, biological studies 471-34-1, Calcium carbonate, biological studies 497-19-8, Sodium carbonate, biological studies 557-04-0, Magnesium stearate 568-72-9, Tanshinone IIA 616-45-5, Pyrrolidone 822-16-2, Sodium stearate 1309-48-4, Magnesium oxide, biological studies 7631-86-9, Silicon dioxide, biological studies 7647-14-5, Sodium chloride, biological studies 7778-18-9, Calcium sulfate 9000-11-7, Carboxymethyl **cellulose** 9002-89-5, Polyvinyl alcohol 9004-32-4, Sodium carboxymethyl **cellulose** 9004-44-8, **Cellulose** phthalate 9004-48-2, **Cellulose** propionate 9004-53-9, Dextrin 9004-57-3, Ethyl **cellulose** 9004-64-2, Hydroxypropyl **cellulose** 9004-65-3, Hydroxypropyl methyl **cellulose** 9004-67-5, Methyl **cellulose** 9004-99-3, Polyoxyethylene monostearate 9005-25-8, Starch, biological studies 9005-65-6, Polysorbate 80 9012-76-4, Chitosan 9050-04-8, Calcium carboxymethyl **cellulose** 9050-31-1, Hydroxypropyl methyl **cellulose** phthalate 9063-38-1, Sodium carboxymethyl starch 10043-35-3, Boric acid, biological studies 10103-46-5, Calcium phosphate 21645-51-2, Aluminum hydroxide, biological studies 25322-68-3, Polyethylene glycol 25610-19-9, Polyethylene phthalate 26446-35-5, Glyceryl acetate 37205-99-5, Carboxymethyl ethyl **cellulose** 53237-50-6 70535-77-2, Hydroxypropyl methyl **cellulose**

acetate-succinate 106392-12-5, Poloxamer 188  
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)  
(antiseptic and anti-inflammatory chinese patent preparation and its  
quality  
control)

L117 ANSWER 6 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2006:883056 CAPLUS Full-text  
DOCUMENT NUMBER: 145:321596  
TITLE: Total flavone **extract** of Hypericum ascyron  
and preparation and use thereof  
INVENTOR(S): Wang, Xianrong; Zhou, Yaqiu; Zhou, Guangjiao; Zhou, Li  
PATENT ASSIGNEE(S): Peop. Rep. China  
SOURCE: Faming Zhuanqin Shengqing Gongkai Shuomingshu, 13pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO.  | DATE     |
|------------------------|------|----------|------------------|----------|
| CN 1821255             | A    | 20060823 | CN 2006-10038949 | 20060316 |
| PRIORITY APPLN. INFO.: |      |          | CN 2006-10038949 | 20060316 |

AB The **extract** of Hypericum ascyron comprising total flavone 40-90%, is prepared by pulverizing dried Hypericum ascyron, **extracting** 8-10 times with 40-95% ethanol under heating and refluxing for 1-2 h, repeating thrice, vacuum concentrating at <60°C, dissolving in boiling **water**, stewing for 24 h, filtrating, separating on polyamide or macroporous resin column with 60-80% ethanol solution as eluent, vacuum concentrating and drying in vacuum. The flavone **extract** of Hypericum ascyron contains rutin 5.0-15.0, hyperin 8.0-25.0, isoquercetin 10.0-30.0, quercetin 2.0-7.0 and kaempferol 0.8-2.5%. The **extracted** flavone **extract** can be prepared into medical formulation (injection, dripping pill, tablet, capsule, granule, suspension or oral solution) for treating cardio-cerebral ischemia in the presence of pharmaceutical adjuvant, such as starch, polyethylene glycol, poloxamer, Tween, glycerol, dextrin, microcryst. **cellulose**, low substituted hydroxypropylmethyl **cellulose**, magnesium stearate, sodium chloride, sodium hydrogen sulfite, mannitol, glucose, sodium sulfite, sodium thiosulfate, benzoic acid, sorbic acid, gelatin, citric acid, tartaric acid, sodium hydrogen carbonate, sodium pyrosulfite, sodium hydroxymethyl **cellulose**, edible vegetable oil, beeswax or refined honey.

CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 1

ST Hypericum flavone **extn** heart brain antiischemics

IT Porous materials  
(adsorbents; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Liquid chromatography  
(adsorption; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Thrombosis  
(arterial; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT **Drug delivery systems**  
(capsules, soft; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT **Drug delivery systems**  
(capsules; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Drug delivery systems  
(dripping pills; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Drug delivery systems  
(granules; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Drug delivery systems  
(infusions; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Drug delivery systems  
(injections, freeze-dried; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Drug delivery systems  
(injections; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Artery, disease  
(middle cerebral, occlusion; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Adsorbents  
(porous; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Drug delivery systems  
(powders; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Drug delivery systems  
(solns., oral; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Drug delivery systems  
(suspensions; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Drug delivery systems  
(tablets; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Anti-ischemic agents

Beeswax

Brain, disease

Essences

Heart, disease

Honey

Hypericum ascyron  
(total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Flavones  
RL: ANT (Analyte); PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)  
(total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Polyamides, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Gelatins, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Polyoxalkylenes, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

use thereof)

IT Fats and Glyceridic oils, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (vegetable; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT Thrombosis  
 (venous; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT 7440-44-0, Activated carbon, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (activated; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT **9004-34-6, Cellulose**, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (microcrystal; total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT 117-39-5, Quercetin 153-18-4, Rutin 482-35-9, Isoquercetin 482-36-0, Hyperin 520-18-3, Kaempferol  
 RL: ANT (Analyte); PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)  
 (total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT 64-17-5, Ethanol, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

IT 50-99-7, D-Glucose, biological studies 56-81-5, Glycerol, biological studies 65-85-0, Benzoic acid, biological studies 69-65-8, Mannitol 77-92-9, Citric acid, biological studies 87-69-4, Tartaric acid, biological studies 110-44-1, Sorbic acid 144-55-8, Sodium hydrogen carbonate, biological studies 557-04-0, Magnesium stearate 7631-90-5, Sodium hydrogen sulfite **7647-14-5**, Sodium chloride, biological studies 7681-57-4, Sodium pyrosulfite 7757-83-7, Sodium sulfite 7772-98-7, Sodium thiosulfate 9004-53-9, Dextrin **9004-65-3D**, Hydroxypropylmethyl **cellulose**, low substituted 9005-25-8, Starch, biological studies 9005-65-6, Tween 80 25322-68-3, Polyethylene glycol **68190-68-1**, Sodium hydroxymethyl **cellulose** 106392-12-5, Poloxamer  
 RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)  
 (total flavones **extracted** from Hypericum ascyron and preparation and use thereof)

L117 ANSWER 7 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2006:815041 CAPLUS Full-text  
 DOCUMENT NUMBER: 145:404080  
 TITLE: Drug delivery systems of Chinese medicine for treating kidney disease and their preparation  
 INVENTOR(S): Wang, Hengxin  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhanli Shenqing Gongkai Shuomingshu, 17pp.  
 CODEN: CNXKEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE  | APPLICATION NO. | DATE  |
|------------|------|-------|-----------------|-------|
| -----      | ---- | ----- | -----           | ----- |

CN 1813975 A 20060809 CN 2005-10032466 20051130  
PRIORITY APPLN. INFO.: CN 2005-10032466 20051130

AB The invention relates to a medicine formulation for treating kidney diseases. The Chinese medicine is composed of prepared Rehmannia root, fleece-flower root, bark of Eucommia, Herba pyrolae, Drynaria, root of Kudzu vine, Ramulus Uncariae cum Uncis, notoginseng and Raphanus sativus Linne. The method comprises (1), weighting 50-350 parts of prepared Rehmannia root, 100-500 parts of fleece-flower root, 40-250 parts of bark of Eucommia, 40-250 parts of Herba pyrolae, 40-250 parts of Drynaria, 10-200 parts of root of Kudzu vine, 10-200 parts of Ramulus Uncariae cum Uncis, 5-100 parts of notoginseng, 10-150 parts of Raphanus sativus Linne; (2), boiling (1) with **water** for 1-4 times, 1-4 h each time, combining solns., filtering, and concentrating to obtain 1.2-1.4 g/l (80°) **extractive**, drying, pulverizing to get powders; (3), mixing powders and adding excipient to prepare into drop pill, micropill, micropill capsule, granule, effervescent granule, capsule, soft capsule, tablet, oral solution, injection, powder, ointment. The quality control method comprises detecting Puerarin by HPLC with methanol-H<sub>2</sub>O as mobile phase.

CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 64

IT **Drug delivery systems**  
(**capsules**, controlled-release; drug delivery systems of Chinese medicine for treating kidney disease and their preparation)

IT **Drug delivery systems**  
(**capsules**, soft; drug delivery systems of Chinese medicine for treating kidney disease and their preparation)

IT **Drug delivery systems**  
(**capsules**, sustained-release; drug delivery systems of Chinese medicine for treating kidney disease and their preparation)

IT **Drug delivery systems**  
(**capsules**; drug delivery systems of Chinese medicine for treating kidney disease and their preparation)

IT **9004-38-0**, CAP  
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(CAP; drug delivery systems of Chinese medicine for treating kidney disease and their preparation)

IT 50-99-7, Glucose, biological studies 56-81-5, Glycerin, biological studies 57-11-4, Stearic acid, biological studies 57-50-1, Sugar, biological studies 63-42-3, Lactose 67-63-0, Isopropanol, biological studies 77-92-9, Citric acid, biological studies 87-69-4, Tartaric acid, biological studies 87-99-0, Xylitol 102-76-1, Triacetyl Glycerin 110-17-8, Fumaric acid, biological studies 110-44-1, Sorbic acid 128-44-9, Saccharin sodium 144-55-8, Carbonic acid monosodium salt, biological studies 151-21-3, Sodium dodecyl sulfate, biological studies 471-34-1, Calcium carbonate, biological studies 497-19-8, Sodium carbonate, biological studies 557-04-0, Magnesium stearic acid 3681-99-0, Puerarin 7585-39-9,  $\beta$ -Cyclodextrin **7647-14-5**, Sodium chloride, biological studies 7757-93-9 7778-18-9, Calcium sulfate **9000-11-7**, Carboxymethyl **cellulose** 9002-89-5, Polyvinyl alcohol 9003-39-8, PVP **9004-32-4**, Sodium carboxymethyl **cellulose** **9004-34-6**, Crystalline **cellulose**, biological studies **9004-48-2**, **Cellulose** propionate 9004-53-9, Dextrin **9004-57-3**, Ethyl **cellulose** **9004-64-2**, Hydroxypropyl **Cellulose** **9004-65-3**, Hydroxypropylmethyl **cellulose** **9004-67-5**, Methyl **cellulose** **9005-18-9**, Propyl **cellulose** 9005-25-8, Starch, biological studies 9005-64-5, Tween 20 **9050-04-8** 10043-35-3, Boric acid, biological studies 10103-46-5, Calcium phosphate 21645-51-2, Aluminum hydroxide, biological studies 25322-68-3, PEG

26264-14-2, Propanediol 26446-35-5, Acetyl monoglyceride 57817-89-7,  
Stevioside 106392-12-5, Poloxamer 188  
RL: MOA (Modifier or additive use); **THU (Therapeutic use)**; BIOL  
(Biological study); USES (Uses)  
(drug delivery systems of Chinese medicine for treating kidney disease  
and their preparation)

L117 ANSWER 8 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2006:301802 CAPLUS Full-text  
DOCUMENT NUMBER: 144:463264  
TITLE: Method for preparing high-purity pancreatic kallikrein  
and pharmaceutical preparations thereof  
INVENTOR(S): Ma, Biao; Wei, Huawei; Wang, Tianyan  
PATENT ASSIGNEE(S): Beijing Saisheng Pharmaceutical Co., Ltd., Peop. Rep.  
China  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 23 pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO.  | DATE     |
|------------------------|------|----------|------------------|----------|
| CN 1737134             | A    | 20060222 | CN 2004-10009460 | 20040820 |
| PRIORITY APPLN. INFO.: |      |          | CN 2004-10009460 | 20040820 |

AB The title method comprises (1) preliminarily purifying porcine or bovine pancreas to obtain active component 1 containing mainly pancreatic kallikrein (also called pancreatic kallidinogenase); (2) purifying the active component 1 by high performance liquid chromatog. (HPLC) to obtain active component 2; (3) using the active component 2 as antigen to prepare anti-pancreatic kallikrein antibody; (4) linking the antibody to an affinity chromatog. medium to prepare an immunoaffinity column; and (5) purifying the above active component 1 by the immunoaffinity column to obtain high-purity pancreatic kallikrein. The invention also provides a pharmaceutical preparation of the pancreatic kallikrein for i.v. administration.

CC 7-2 (Enzymes)

Section cross-reference(s): 9

IT Affinity chromatography

Bos

Dialysis

Drugs

HPLC

Immunostimulants

Ion exchange chromatography

Pancreas

Physiological **saline** solutions

Protein sequences

Purification

Solvent **extraction**

Sus scrofa

(affinity chromatog. for preparing high-purity pancreatic kallikrein from porcine or bovine pancreas and pharmaceutical prepns. thereof)

IT **Drug delivery systems**

(**capsules**, enteric; affinity chromatog. for preparing high-purity pancreatic kallikrein from porcine or bovine pancreas and pharmaceutical prepns. thereof)

IT 63-42-3, Lactose **7647-14-5**, Sodium chloride, biological studies

9004-54-0, Dextran, biological studies 9005-25-8, Starch, biological studies 14265-44-2, Phosphate, biological studies **68190-68-1**,

Sodium hydroxymethyl **cellulose**

RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)

(affinity chromatog. for preparing high-purity pancreatic kallikrein from porcine or bovine pancreas and pharmaceutical preps. thereof)

L117 ANSWER 9 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:316493 CAPLUS Full-text

DOCUMENT NUMBER: 144:447102

TITLE: Method of preparing high-purity pancreatic kallikrein from snake venom and pharmaceutical preparations of pancreatic kallikrein

INVENTOR(S): Ma, Biao; Wei, Huawei; Wu, Dan

PATENT ASSIGNEE(S): Beijing Saisheng Pharmaceutical Co., Ltd., Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 21 pp.  
CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND   | DATE     | APPLICATION NO.  | DATE     |
|------------------------|--|----------|------------------|----------|
| CN 1733913             | A  | 20060215 | CN 2004-10009422 | 20040811 |
| PRIORITY APPLN. INFO.: |  |          | CN 2004-10009422 | 20040811 |
| AB                     | The title method comprises (1) preliminarily purifying snake venom to obtain an active component 1 that contains mainly pancreatic kallikrein; (2) purifying the component 1 to obtain a component 2; (3) preparing specific antibodies against the pancreatic kallikrein using the component 2 as antigen; (4) preparing an immunoaffinity chromatog. column by binding the antibodies to an affinity chromatog. medium; and (5) purifying the component 1 on the column. |          |                  |          |
| CC                     | 7-2 (Enzymes)<br>Section cross-reference(s): 1   |          |                  |          |
| IT                     | <b>Drug delivery systems</b><br>(capsules, enteric; method for preparing high-purity pancreatic kallikrein from snake venom and pharmaceutical preps. of pancreatic kallikrein)  |          |                  |          |
| IT                     | Affinity chromatography<br>Dialysis<br>Drugs<br>HPLC<br>Immunostimulants<br>Ion exchange chromatography<br><b>Physiological saline solutions</b><br>Protein sequences<br>Purification<br>Snake<br>Solvent extraction<br>Venoms<br>(method for preparing high-purity pancreatic kallikrein from snake venom and pharmaceutical preps. of pancreatic kallikrein)   |          |                  |          |
| IT                     | 63-42-3, Lactose <b>7647-14-5</b> , Sodium chloride, biological studies<br>9004-54-0, Dextran, biological studies 9005-25-8, Starch, biological studies 14265-44-2, Phosphate, biological studies <b>68190-68-1</b> , Sodium hydroxymethyl <b>cellulose</b><br>RL: <b>THU (Therapeutic use)</b> ; BIOL (Biological study); USES (Uses)<br>(method for preparing high-purity pancreatic kallikrein from snake venom and pharmaceutical preps. of pancreatic kallikrein)     |          |                  |          |

L117 ANSWER 10 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:962287 CAPLUS Full-text  
 DOCUMENT NUMBER: 143:242036  
 TITLE: Galanin receptors and brain injury  
 INVENTOR(S): Wynick, David  
 PATENT ASSIGNEE(S): Neurotargets Limited, UK  
 SOURCE: PCT Int. Appl., 42 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 2005080427   | A1   | 20050901 | WO 2005-GB188   | 20050118   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |            |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| AU 2005214115   | A1   | 20050901 | AU 2005-214115  | 20050118   |
| CA 2555550  | A1   | 20050901 | CA 2005-2555550 | 20050118   |
| EP 1723175  | A1   | 20061122 | EP 2005-701953  | 20050118   |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR   |      |          |                 |            |
| PRIORITY APPLN. INFO.:  |      |          | GB 2004-3509    | A 20040217 |
|   |      |          | WO 2005-GB188   | W 20050118 |

AB The invention provides the use of a GALR2-specific agonist in the preparation of a medicament for the prevention or treatment of brain injury, damage or disease, wherein the brain injury or damage is caused by one of: embolic, thrombotic or hemorrhagic stroke; direct or indirect trauma or surgery to the brain or spinal cord; ischemic or embolic damage to the brain during cardiopulmonary bypass surgery or renal dialysis; reperfusion brain damage following myocardial infarction; brain disease; chemical damage as the result of excess alc. consumption or administration of chemotherapy agents for cancer treatment; radiation damage; or immunol. damage as the result of bacterial or viral infection. The brain disease may be one of Alzheimer's Disease, Parkinson's Disease, Multiple Sclerosis or variant Creutzfeld Jacob Disease.

IC ICM C07K014-72  
 ICS A61K039-00

CC 1-11 (Pharmacology)  
 Section cross-reference(s): 4, 14, 63

IT Suspensions  
 (aqueous; galanin receptors and brain injury)

IT **Drug delivery systems**  
 (capsules; galanin receptors and brain injury)

IT Drug delivery systems  
 (solns., aqueous; galanin receptors and brain injury)

IT 56-40-6, Glycine, biological studies 57-55-6, Propylene glycol, biological studies 63-42-3, Lactose 69-65-8, Mannitol 100-51-6, Benzyl alcohol, biological studies 110-44-1, Sorbic acid 112-80-1, Oleic acid, biological studies 557-04-0, Magnesium stearate 637-12-7, Aluminum stearate 1338-41-6, Sorbitan monostearate 1344-28-1, Alumina,

biological studies 5333-42-6, 2-Octyldodecanol 7440-66-6D, Zinc, compds. 7558-79-4, Disodium hydrogen phosphate 7647-14-5, Sodium chloride, biological studies 7732-18-5, Water, biological studies 7758-11-4 7778-77-0 9003-39-8, Polyvinylpyrrolidone 9004-32-4, Sodium **carboxymethylcellulose** 9004-34-6D, **Cellulose**, compds. 9005-25-8, Corn starch, biological studies 9005-67-8, Polysorbate 60 14987-04-3, Magnesium trisilicate 24634-61-5, Potassium sorbate 25322-68-3, Polyethylene glycol 25322-68-3D, compds. 25322-69-4D, compds. 37220-82-9D, Oleic acid glyceride, derivs. RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses) (galanin receptors and brain injury)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L117 ANSWER 11 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:564598 CAPLUS Full-text  
 DOCUMENT NUMBER: 143:77319  
 TITLE: Continuous multi-microencapsulation process for improving the stability and storage life of biologically active ingredients in foods, cosmetics and drugs  
 INVENTOR(S): Casana Giner, Victor; Gimeno Sierra, Miguel; Gimeno Sierra, Barbara; Moser, Martha  
 PATENT ASSIGNEE(S): GAT Formulation G.m.b.H., Austria  
 SOURCE: PCT Int. Appl., 72 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Spanish  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE       |
|---|------|----------|------------------|------------|
| WO 2005058476   | A1   | 20050630 | WO 2004-ES562    | 20041217   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                  |            |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG  |      |          |                  |            |
| ES 2235642  | A1   | 20050701 | ES 2003-2998     | 20031218   |
| ES 2235642  | B2   | 20060301 |                  |            |
| AU 2004298792   | A1   | 20050630 | AU 2004-298792   | 20041217   |
| CA 2550615  | A1   | 20050630 | CA 2004-2550615  | 20041217   |
| EP 1702675  | A1   | 20060920 | EP 2004-805105   | 20041217   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS   |      |          |                  |            |
| CN 1917946  | A    | 20070221 | CN 2004-80041872 | 20041217   |
| PRIORITY APPLN. INFO.:  |      |          | ES 2003-2998     | A 20031218 |
|   |      |          | WO 2004-ES562    | W 20041217 |

AB Microcapsules are obtained in a continuous **water-in-oil-in- water** microencapsulation process through in situ and interfacial polymerization of the emulsion. A formulation comprises a continuous **water** phase having a dispersion of microcapsules which contain oil drops and in the inside of each

oil phase drop (containing optionally oil-soluble materials) there is a dispersion of **water**, or **aqueous extract** or **water**-dispersible material or **water**-soluble material. The oil drops are encapsulated with a polymerizable material of natural origin. Such microcapsules are appropriate for spray-drying, to be used as dry powder, lyophilized, self-emulsifiable powder, gel, cream, and any liquid form. The active compds. included in the microcapsules are beneficial to health and other biol. purposes. Such formulations are appropriate for incorporation in any class of food, especially for the production of nutraceuticals, as well as cosmetic products (such as rejuvenescence creams, anti-wrinkle creams, gels, bath and shower consumable products and sprays). The preps. are adequate to stabilize compds. added to food, media for cultivating microbes and nutraceuticals, especially those which are easily degradable or oxidizable.

IC ICM B01J013-16

CC 17-4 (Food and Feed Chemistry)

Section cross-reference(s): 62, 63

IT *Abelmoschus moschatus*

*Adansonia digitata*

*Adonis vernalis*

*Aesculus hippocastanum*

*Agglomeration preventers*

*Agrimonia eupatoria*

*Agrocybe cylindracea*

*Alchornea laxiflora*

*Alcoholic beverages*

*Allium cepa*

*Allium sativum*

*Alpinia officinarum*

*Amaranthus caudatus*

*Ananas comosus*

*Andrographis paniculata*

*Angelica archangelica*

*Aniba rosaeodora*

*Anthriscus cerefolium*

*Antimicrobial agents*

*Antioxidants*

*Apium graveolens*

*Apple juice*

*Arabidopsis*

*Arachis hypogaea*

*Arbutus unedo*

*Arctostaphylos uva-ursi*

*Ardisia japonica*

*Areca catechu*

*Artocarpus altilis*

*Atropa belladonna*

*Aureobasidium pullulans*

*Bacopa monnieri*

*Bakery products*

*Bath preparations*

*Berberis vulgaris*

*Berry*

*Betula alba*

*Beverages*

*Bifidobacterium bifidum*

*Bifidobacterium infantis*

*Bixa orellana*

*Brassica*

*Brassica campestris*

*Brassica napus*

Breakfast cereal  
*Brugia malayi*  
*Cajanus indicus*  
*Camellia oleifera*  
*Camellia sinensis*  
*Camptotheca acuminata*  
*Cananga odorata*  
Candy  
*Cannabis*  
*Cannabis sativa*  
*Carica papaya*  
*Carum carvi*  
*Carum petroselinum*  
Cations  
*Centella asiatica*  
*Cephalophorus*  
Cereal (grain)  
*Chamaemelum nobile*  
Cheese  
*Chimaphila umbellata*  
Chocolate  
*Cicer arietinum*  
*Cichorium intybus*  
*Cinchona calisaya*  
*Cinnamomum*  
*Cinnamomum camphora*  
*Cinnamomum zeylanicum*  
*Cistus albidus*  
Citrus  
*Citrus aurantifolia*  
*Citrus aurantium*  
*Citrus aurantium dulcis*  
*Citrus bergamia*  
*Citrus grandis*  
*Citrus limon*  
*Citrus paradisi*  
*Citrus reticulata*  
*Citrus sinensis*  
*Claviceps purpurea*  
*Coccinia cordifolia*  
Cocoa products  
*Coffea arabica*  
*Cola acuminata*  
*Colchicum autumnale*  
Colloids  
Condiments  
Confectionery  
*Coriandrum sativum*  
*Corynanthe johimbe*  
Cosmetics  
*Crataegus*  
*Crataegus laevigata*  
*Crataegus monogyna*  
*Crataegus oxyacantha*  
*Crocus sativus*  
Crosslinking  
*Crotalaria sessiliflora*  
*Croton eluteria*  
*Cucumis melo*  
*Cucurbita*

Culture media  
Cuminum cyminum  
Curcuma longa  
Curcuma zedoaria  
Cyclopia intermedia  
Cymbopogon nardus  
Cynara scolymus  
Dairy products  
Datura  
Daucus carota  
Desserts  
Dietary supplements  
Digestion, biological  
Digitalis lanata  
Digitalis purpurea  
Diplazium esculentum  
Dolichos biflorus  
Dolichos lablab  
**Drug delivery systems**  
Echinacea angustifolia  
Echinacea pallida  
Echinacea purpurea  
Egg, poultry  
Elettaria cardamomum  
Emulsifying agents  
Enterococcus durans  
Enterococcus faecalis  
Enterococcus gallinarum  
Ephedra  
Ephedra sinica  
Erythroxylum  
Escherichia coli  
Eubacteria  
Eucalyptus officinalis  
Eucommia ulmoides  
Fabaceae  
Feed additives  
Ferula assa-foetida  
Ferula foetida  
Fish  
Flavor  
Flavoring materials  
Foeniculum vulgare  
Food additives  
Food emulsions  
Food processing  
Fraxinus chinensis rhynchophylla  
Freeze drying  
Fruit  
Fruit and vegetable juices  
Fungi  
Galipea officinalis  
Gamma ray sterilization  
Ginkgo biloba  
Glaucium flavum  
Glycyrrhiza  
Glycyrrhiza glabra  
Gossypium  
Grape juice  
Hamamelis virginiana

Hedeoma  
*Helichrysum angustifolium*  
Honey  
*Humulus lupulus*  
*Hydrastis canadensis*  
Hydrocolloids  
Hydrogels  
*Hyoscyamus niger*  
*Hypericum perforatum*  
Hyptis  
*Hyssopus officinalis*  
*Iberis amara*  
*Ilex paraguariensis*  
Jams and Jellies  
*Jasminum grandiflorum*  
*Jasminum officinale*  
*Juniperus*  
*Juniperus communis*  
*Kluyveromyces marxianus*  
*Lactobacillus acidophilus*  
*Lactobacillus casei*  
*Lactobacillus crispatus*  
*Lactobacillus delbrueckii bulgaricus*  
*Lactobacillus fermentum*  
*Lactobacillus gasseri*  
*Lactobacillus paracasei*  
*Lactobacillus plantarum*  
*Lactobacillus reuteri*  
*Lactobacillus rhamnosus*  
*Lactobacillus salivarius*  
Lamiaceae  
*Laurus nobilis*  
*Lavandula*  
*Lavandula hybrida*  
*Ledum palustre*  
*Leontopodium alpinum*  
*Leonurus*  
*Leucas*  
*Leucosporidium scottii*  
*Lobelia inflata*  
*Lycopersicon esculentum*  
*Lycopus*  
*Malus pumila*  
*Mangifera indica*  
*Manihot esculenta*  
*Marrubium*  
*Marrubium vulgare*  
*Matricaria recutita*  
Meat  
*Medicago sativa*  
*Melissa officinalis*  
Mentha  
*Mentha pulegium*  
*Mentha spicata*  
Microcapsules  
Microorganism  
*Monarda*  
*Monarda punctata*  
Mouth  
*Myristica fragrans*

Myroxylon pereirae  
 Mytilus galloprovincialis  
 Nectria  
 Neolentinus lepideus  
 Nicotiana tabacum  
 Nutrients  
 Ocimum basilicum  
 Odor and Odorous substances  
 Olea europaea  
 Orange  
 Orange juice  
 Origanum majorana  
 Papaver somniferum  
 Parthenium hysterophorus  
 Pasteurization  
 Pelargonium  
 Pelargonium graveolens  
 Perilla  
 Phaseolus lunatus  
     (continuous multi-**microencapsulation** process for improving  
     stability and storage life of biol. active ingredients in foods,  
     cosmetics and drugs)

IT    Avena sativa  
     (extract; continuous multi-microencapsulation process for  
     improving stability and storage life of biol. active ingredients in  
     foods, cosmetics and drugs)

IT    **Drug delivery systems**  
     (microcapsules; continuous multi-**microencapsulation**  
     process for improving stability and storage life of biol. active  
     ingredients in foods, cosmetics and drugs)

IT    **Drug delivery systems**  
     (syrups; continuous multi-**microencapsulation** process for  
     improving stability and storage life of biol. active ingredients in  
     foods, cosmetics and drugs)

IT    Emulsions  
     (water-in-oil-in-water, p; continuous  
     multi-microencapsulation process for improving stability and storage  
     life of biol. active ingredients in foods, cosmetics and drugs)

IT    50-81-7, L-Ascorbic acid, biological studies    52-90-4, L-Cysteine,  
     biological studies    56-89-3, L-Cystine, biological studies    59-02-9  
 60-33-3, 9,12-Octadecadienoic acid (9Z,12Z)-, biological studies  
 64-17-5, Ethanol, biological studies    70-18-8, biological studies  
 73-31-4    74-79-3, L-Arginine, biological studies    83-88-5, Riboflavin,  
     biological studies    88-26-6    90-05-1    90-19-7    94-41-7    95-48-7,  
     biological studies    99-50-3    99-96-7, biological studies    106-44-5,  
     biological studies    108-39-4, biological studies    111-02-4    112-80-1,  
     9-Octadecenoic acid (9Z)-, biological studies    117-39-5    119-13-1  
 121-34-6    123-07-9    126-29-4    128-37-0, biological studies    134-04-3  
 144-68-3    146-48-5    148-03-8    149-91-7, biological studies    153-18-4  
 154-23-4    303-98-0    305-84-0    327-97-9    331-39-5    432-70-2,  
 β,ε-Carotene    446-72-0    463-40-1    465-42-9    469-38-5  
 472-61-7    480-17-1    480-18-2    480-19-3    480-40-0    480-41-1    486-66-8  
 490-23-3    490-46-0    491-70-3    491-80-5    506-26-3    506-32-1  
 514-78-3, β,β-Carotene-4,4'-dione    520-18-3    520-26-3  
 520-33-2    520-34-3    520-36-5    522-12-3    528-48-3    529-44-2    530-57-4  
 530-59-6    531-95-3    541-15-1    548-83-4    552-58-9    580-72-3    583-17-5  
 588-30-7    863-03-6    970-74-1    989-51-5    1135-24-6    1151-98-0  
 1154-78-5    1200-22-2    1406-18-4, Vitamin E    1421-63-2    1721-51-3  
 1783-84-2    1912-50-1    1948-33-0    2444-28-2    6217-54-5    7235-40-7,

β,β-Carotene 7400-08-0 7439-95-4, Magnesium, biological studies 7440-66-6, Zinc, biological studies 7616-22-0  
**7647-14-5**, Sodium chloride (NaCl), biological studies 7782-49-2, Selenium, biological studies 7786-61-0 8013-90-9, Ionone 8062-15-5, Lignosulfonate 8063-16-9, Psyllium gum 9000-01-5, Gum arabic 9000-07-1, Carrageenan 9000-30-0, Guar gum 9000-36-6, Karaya gum 9000-65-1, Gum tragacanth 9000-69-5, Pectin 9002-18-0, Agar 9004-34-6, **Cellulose**, biological studies 9004-53-9, Dextrin 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9005-53-2, Lignin, biological studies 9005-80-5, Inulin 9012-76-4, Chitosan 9036-66-2, Arabinogalactan 9041-22-9, β-Glucan 10028-15-6, Ozone, biological studies 10236-47-2 10417-94-4 10597-60-1 11078-30-1, Galactomannan 11138-66-2, Xanthan gum 12619-70-4, Cyclodextrin 12676-20-9, Apocarotenal 13463-28-0 13920-14-4 14101-61-2 14259-46-2 14660-91-4 17912-87-7 20290-75-9 21255-69-6 23290-26-8 24897-98-1 25013-16-5 25429-38-3 25612-59-3 26161-42-2 27785-15-5 29388-59-8 31661-06-0 32619-42-4 32839-34-2 33135-50-1, Poly-L-lactide 55167-29-8 58749-22-7 59870-68-7 78473-71-9 80226-00-2  
 RL: COS (Cosmetic use); FFD (Food or feed use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)  
 (continuous multi-microencapsulation process for improving stability and storage life of biol. active ingredients in foods, cosmetics and drugs)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

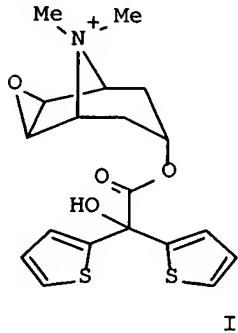
L117 ANSWER 12 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:409514 CAPLUS Full-text  
 DOCUMENT NUMBER: 142:447337  
 TITLE: Method for producing tiotropium salts and pharmaceutical formulations, containing the same  
 INVENTOR(S): Banholzer, Rolf; Pfrengle, Waldemar; Sieger, Peter  
 PATENT ASSIGNEE(S): Boehringer Ingelheim International G.m.b.H., Germany; Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G.  
 SOURCE: PCT Int. Appl., 58 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 2005042526   | A1   | 20050512 | WO 2004-EP12268 | 20041029 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |          |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
| AU 2004285683   | A1   | 20050512 | AU 2004-285683  | 20041029 |
| CA 2544348  | A1   | 20050512 | CA 2004-2544348 | 20041029 |
| US 2005131007   | A1   | 20050616 | US 2004-977753  | 20041029 |
| EP 1682541  | A1   | 20060726 | EP 2004-791028  | 20041029 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR  
 CN 1882582 A 20061220 CN 2004-80032528 20041029  
 BR 2004016136 A 20070102 BR 2004-16136 20041029  
 NO 2006001440 A 20060712 NO 2006-1440 20060330  
 PRIORITY APPLN. INFO.: EP 2003-25075 A 20031103  
 US 2003-528339P P 20031210  
 WO 2004-EP12268 W 20041029

OTHER SOURCE(S): MARPAT 142:447337

GI



**AB** The invention provides a method for producing novel tiotropium salts  $I \cdot X^-$ , [ $X^-$  = anion, such as, halogen, C1-10-alkanesulfonate, C1-10-alkyl sulfate, C6-10-arylsulfonate], their hydrates and solvates, said novel tiotropium salts as such, pharmaceutical formulations, containing the salts and the use thereof for producing a medicament for the treatment of respiratory tract diseases, in particular, for the treatment of chronic obstructive pulmonary disease (COPD) and asthma (no data). The method comprises conversion of  $I \cdot Y^-$  [ $Y^-$  = anion different from  $X^-$ ] to  $I \cdot X^-$  via reaction with ionic source, Kat $+X^-$  [Kat = cation, such as, alkali metal, alkaline earth metal,  $\text{NH}_4^+$ ,  $\text{N}(\text{C1-8-alkyl})_4$ , especially  $\text{N}(\text{C1-4-alkyl})_4$ ], in a suitable solvent.

**IC** ICM C07D451-10

ICS A61K031-46; A61P011-00

**CC** 31-3 (Alkaloids)

Section cross-reference(s): 33, 34, 63, 75

**IT** **Drug delivery systems**

(capsules; method for producing tiotropium salts and pharmaceutical formulations containing them)

**IT** 50-70-4, Sorbitol, biological studies 50-99-7, Glucose, biological studies 57-48-7, Fructose, biological studies 57-50-1, Saccharose, biological studies 63-42-3, Lactose 69-65-8, Mannitol 69-79-4, Maltose 87-99-0, Xylitol 99-20-7, Trehalose 147-81-9, Arabinose 471-34-1, Calcium carbonate, biological studies 7585-39-9,  $\beta$ -Cyclodextrin 7585-39-9D,  $\beta$ -Cyclodextrin, hydroxypropylated **9004-34-6**, Cellulose, biological studies 9004-53-9, Dextrin 9004-54-0, Dextran, biological studies 9050-36-6, Maltodextrin 10016-20-3,  $\alpha$ -Cyclodextrin 15595-35-4, Arginine hydrochloride 17465-86-0,  $\gamma$ -Cyclodextrin 55216-11-0, Permethyl- $\beta$ -cyclodextrin

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(adjuvant; method for producing tiotropium salts and pharmaceutical formulations containing them)

IT 7647-14-5, Sodium chloride, reactions 12027-06-4, Ammonium iodide  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (anion exchange by, of tiotropium salts; method for producing tiotropium salts and pharmaceutical formulations containing them)

IT 7732-18-5, Water, biological studies  
 RL: NUU (Other use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (anion exchange solvent and drug formulation co-solvent/solvent; method for producing tiotropium salts and pharmaceutical formulations containing them)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L117 ANSWER 13 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2006:1129811 CAPLUS Full-text  
 DOCUMENT NUMBER: 145:477846  
 TITLE: Chinese medicinal composition for treating symptoms due to spleen deficiency and collapse of middle warmer energy, and preparation method thereof  
 INVENTOR(S): Wang, Hengxin  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 9pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|---|------|----------|------------------|----------|
| CN 1709363  | A    | 20051221 | CN 2005-10031753 | 20050624 |
| PRIORITY APPLN. INFO.: CN 2005-10031753 20050624  |      |          |                  |          |
| AB The title composition comprises Astragalus membranaceus (processed with honey) 13.9-41.7, Radix Codonopsis (Codonopsis pilosula and/or Codonopsis tangshen) 4.2-12.5, Radix Glycyrrhizae (processed with honey) 7.0-20.9, Atractylodes macrocephala (parched) 4.2-12.5, Angelica sinensis 4.2-12.5, Rhizoma Cimicifugae 4.2-12.5, Radix Bupleuri (Bupleurum chinense and/or Bupleurum scorzonerifolium) 4.2-12.5, Citrus reticulata (Pericarpium Citri Reticulatae) 4.2-12.5, Zingiber officinale 1.5-4.4, and Ziziphus jujuba (Fructus Jujubae) 2.8-8.4 wt%. The title preparation method comprises pulverizing 15-45 wt% of Radix Codonopsis and Radix Glycyrrhizae to fine powder; <b>extracting</b> volatile oil from Atractylodes macrocephala, Citrus reticulata (Pericarpium Citri Reticulatae) and Angelica sinensis, collecting the volatile oil, solution and residue; percolating the residue and Zingiber officinale with 50% of ethanol (prepared by the above solution), recovering ethanol from the percolate; decocting 40-90 wt% of the above fine powder, the rest amount of Radix Codonopsis and the rest ingredients in <b>water</b> , filtering, concentrating the filtrate, adding the above percolate and concentrating to obtain a concentrated <b>extract</b> , adding the rest fine powder, mixing to even, drying, pulverizing to obtain medicinal powder, spraying the above volatile oil, mixing to even, adding proper adjuvants, and making into dripping pill, micro-pellet or soft capsule. The inventive composition can be used for treating symptoms due to deficiency of the spleen and stomach and collapse of middle warmer energy, such as fatigue, asthenia, anorexia, abdominal distention, persistent diarrhea, proctoptosis and uterine prolapse, with the advantages of convenience for carrying and administration, high bioavailability, good |      |          |                  |          |

controllability and stability of product quality, and good therapeutic effects.

IC ICM A61K035-78  
ICS A61K009-20; A61K009-16; A61K009-48; A61P001-14; A61P043-00

CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 1

IT Angelica sinensis  
Anorexia  
Astragalus membranaceus  
Atractylodes macrocephala  
Beeswax  
Bupleurum chinense  
Cimicifuga dahurica  
Citrus reticulata  
Codonopsis  
**Extraction**  
Fillers  
Glycyrrhiza  
Natural products, pharmaceutical  
Syrups (sweetening agents)  
Zingiber officinale  
Ziziphus jujuba  
(Chinese medicinal composition for treating symptoms due to spleen deficiency and collapse of middle warmer energy, and preparation method thereof)

IT **Drug delivery systems**  
(capsules, soft; Chinese medicinal composition for treating symptoms due to spleen deficiency and collapse of middle warmer energy, and preparation method thereof)

IT **Drug delivery systems**  
(capsules; Chinese medicinal composition for treating symptoms due to spleen deficiency and collapse of middle warmer energy, and preparation method thereof)

IT **Drug delivery systems**  
(microcapsules; Chinese medicinal composition for treating symptoms due to spleen deficiency and collapse of middle warmer energy, and preparation method thereof)

IT 50-70-4, Sorbitol, biological studies 50-99-7, D-Glucose, biological studies 56-81-5, Glycerol, biological studies 57-11-4, Stearic acid, biological studies 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 57-55-6, Propylene glycol, biological studies 63-42-3, Lactose 67-63-0, Isopropanol, biological studies 69-65-8, Mannitol 102-76-1, Glyceryl triacetate 151-21-3, Sodium dodecylsulfate, biological studies 471-34-1, Calcium carbonate, biological studies 557-04-0, Magnesium stearate 822-16-2, Sodium stearate 1309-48-4, Magnesium oxide, biological studies 3198-29-6, biological studies 7647-14-5, Sodium chloride, biological studies 7757-93-9, Calcium hydrogen phosphate 7778-18-9, Calcium sulphate 9002-89-5, Polyvinyl alcohol 9003-39-8, Polyvinylpyrrolidone 9004-32-4, Carboxymethyl cellulose 9004-38-0, Cellulose acetate-phthalate 9004-48-2, Cellulose propionate 9004-53-9, Dextrin 9004-57-3, Ethylcellulose 9004-64-2, Hydroxypropyl cellulose 9004-65-3, Hydroxypropyl methylcellulose 9004-67-5, Methylcellulose 9004-99-3, Polyoxyethylene monostearate 9005-25-8, Starch, biological studies 9005-65-6, Polysorbate 80 9063-38-1, Sodium carboxymethyl starch 10043-35-3, Boric acid, biological studies 10103-46-5, Calcium phosphate 14807-96-6, Talc, biological studies 21645-51-2, Aluminum hydroxide, biological studies 25322-68-3, Polyethylene glycol

26446-35-5, Acetyl monoglyceride 31566-31-1, Glyceryl monostearate  
53237-50-6 106392-12-5, Poloxamer 188  
RL: **THU (Therapeutic use); BIOL (Biological study); USES (Uses)**  
(Chinese medicinal composition for treating symptoms due to spleen deficiency and collapse of middle warmer energy, and preparation method thereof)

IT **9004-34-6, Cellulose, biological studies**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(microcryst.; Chinese medicinal composition for treating symptoms due to spleen deficiency and collapse of middle warmer energy, and preparation method thereof)

L117 ANSWER 14 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:547691 CAPLUS Full-text

DOCUMENT NUMBER: 145:34241

TITLE: Chinese medicinal composition for treating inflammations, its preparation and quality control

INVENTOR(S): Wang, Hengxin

PATENT ASSIGNEE(S): Peop. Rep. China

SOURCE: Faming Zhanli Shenqing Gongkai Shuomingshu, 10 pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND  | DATE     | APPLICATION NO.  | DATE     |
|------------------------|-------|----------|------------------|----------|
| -----                  | ----- | -----    | -----            | -----    |
| CN 1679785             | A     | 20051012 | CN 2005-10031252 | 20050205 |
| PRIORITY APPLN. INFO.: |       |          | CN 2005-10031252 | 20050205 |

AB The invention provides a Chinese medicinal composition in the form of pill, soft capsule, or dripping pill for treating inflammations. The composition comprises Rhizoma Coptidis 1-3, Cortex Phellodendri (Phellodendron chinense and/or Phellodendron amurense) 18.2-54.6, Isatis indigotica root 13.7-41.0, 3.7-11.0, and Scutellaria baicalensis 13.7-41.0%. The preparation method comprises the steps of (1) pulverizing Rhizoma Coptidis and Radix Et Rhizoma Rhei into fine powders; (2) decocting Scutellaria baicalensis and Isatis indigotica root in **water**, filtering, and concentrating to give **extract**; (3) decocting Cortex Phellodendri (Phellodendron chinense and/or Phellodendron amurense) in **water**, filtering, concentrating, precipitating with ethanol, filtering, and concentrating to give **extract**, or drying to give dried **extract**; and (4) mixing the products of the above steps, drying, pulverizing into fine powders, mixing with adjuvants, and making into desired dosage form. Also provided is its identification by TLC and assaying of baicalin by HPLC.

IC ICM A61K035-78

ICS A61K009-20; A61K009-48; A61P029-00; G01N030-90; G01N030-02;  
G01N033-15

CC 63-6 (Pharmaceuticals)

IT **Drug delivery systems**

(**capsules**, soft; Chinese medicinal composition for treating inflammations, its preparation and quality control)

IT 50-70-4, Sorbitol, biological studies 50-99-7, Glucose, biological studies 57-50-1, Sucrose, biological studies 63-42-3, Lactose 69-65-8, Mannitol 77-92-9, Citric acid, biological studies 81-25-4, Cholic acid 87-69-4, Tartaric acid, biological studies 110-15-6, Succinic acid, biological studies 110-17-8, Fumaric acid, biological studies 822-16-2, Sodium stearate 1309-48-4, Magnesium oxide, biological studies 7647-14-5, Sodium chloride, biological studies 7757-93-9, Calcium hydrogen phosphate 7778-18-9, Calcium sulfate **9004-32-4**, Carboxymethyl **cellulose**

9004-53-9, Dextrin 9004-57-3, Ethyl **cellulose**  
**9004-64-2**, Hydroxypropyl **cellulose** 9004-65-3,  
Hydroxypropyl methyl **cellulose** 9004-67-5, Methyl  
**cellulose** 9005-25-8, Starch, biological studies 9063-38-1,  
Sodium Carboxymethyl starch 10043-35-3, Boric acid, biological studies  
10103-46-5, Calcium phosphate 14807-96-6, Talc, biological studies  
21645-51-2, Aluminum hydroxide, biological studies 21967-41-9, Baicalin  
25322-68-3, Polyethylene glycol 106392-12-5, Poloxamer 188  
RL: **THU (Therapeutic use); BIOL (Biological study); USES (Uses)**  
(Chinese medicinal composition for treating inflammations, its preparation

and

quality control)

IT **9004-34-6, Cellulose**, biological studies

RL: **THU (Therapeutic use); BIOL (Biological study); USES (Uses)**

(microcryst.; Chinese medicinal composition for treating inflammations, its preparation and quality control)

L117 ANSWER 15 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:547768 CAPLUS Full-text

DOCUMENT NUMBER: 145:34265

TITLE: Chinese medicinal composition for treating gynecological disease, its preparation and quality control

INVENTOR(S): Wang, Hengxin

PATENT ASSIGNEE(S): Peop. Rep. China

SOURCE: Faming Zhanli Shengqing Gongkai Shuomingshu, 10 pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO.  | DATE     |
|------------------------|------|----------|------------------|----------|
| CN 1679780             | A    | 20051012 | CN 2005-10031233 | 20050201 |
| PRIORITY APPLN. INFO.: |      |          | CN 2005-10031233 | 20050201 |

AB The invention provides a Chinese medicinal composition in the form of capsule, soft capsule, dripping pill or dispersible tablet to treat gynecol. disease. The composition is prepared from Lonicera japonica stem 10.7-32.1, Spatholobus suberectus stem 10.7-32.1, Cibotium barometz 10.7-32.1, Herba Taraxaci (Taraxacum mongolicum and/or Taraxacum sinicum) 4.3-12.9, Leonurus japonicus 4.3-12.9, Herba Plantaginis (Plantago asiatica and/or Plantago depressa) 4.3-12.9, Radix Paeoniae Rubra (Paeonia lactiflora and/or Paeonia veitchii) 2.6-7.7, and Ligusticum chuanxiong 2.6-7.7%, by the steps of pulverizing the materials into fine powders, decocting in **water**, filtering, concentrating to give **extract**, precipitating with ethanol, collecting the supernatant, concentrating to give **extract**, or further processing to give dried **extract**, mixing with adjuvants, and making into desired dosage form. Also provided is its identification by TLC and assaying of peoniflorin by HPLC.

IC ICM A61K035-78

ICS A61K009-20; A61K009-48; A61P015-00

CC 63-6 (Pharmaceuticals)

IT **Drug delivery systems**

(**capsules**, soft; Chinese medicinal composition for treating gynecol. disease, its preparation and quality control)

IT **Drug delivery systems**

(**capsules**; Chinese medicinal composition for treating gynecol. disease, its preparation and quality control)

IT 50-70-4, Sorbitol, biological studies 50-99-7, Glucose, biological studies 57-50-1, Sucrose, biological studies 63-42-3, Lactose

69-65-8, Mannitol 77-92-9, Citric acid, biological studies 81-25-4, Cholic acid 87-69-4, Tartaric acid, biological studies 110-15-6, Succinic acid, biological studies 110-17-8, Fumaric acid, biological studies 822-16-2, Sodium stearate 1309-48-4, Magnesium oxide, biological studies 7647-14-5, Sodium chloride, biological studies 7757-93-9, Calcium hydrogen phosphate 7778-18-9, Calcium sulfate 9004-32-4, Carboxymethyl cellulose 9004-53-9, Dextrin 9004-57-3, Ethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-65-3, Hydroxypropyl methyl cellulose 9004-67-5, Methyl cellulose 9005-25-8, Starch, biological studies 9063-38-1, Sodium Carboxymethyl starch 10043-35-3, Boric acid, biological studies 10103-46-5, Calcium phosphate 14807-96-6, Talc, biological studies 21645-51-2, Aluminum hydroxide, biological studies 25322-68-3, Polyethylene glycol 106392-12-5, Poloxamer 188  
 RL: **THU (Therapeutic use); BIOL (Biological study); USES (Uses)**  
 (Chinese medicinal composition for treating gynecol. disease, its preparation and quality control)

IT 9004-34-6, **Cellulose**, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (microcryst.; Chinese medicinal composition for treating gynecol. disease, its preparation and quality control)

L117 ANSWER 16 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2006:282234 CAPLUS Full-text  
 DOCUMENT NUMBER: 145:33945  
 TITLE: Oral traditional Chinese medicinal preparation for treating vascular headache and hemicrania  
 INVENTOR(S): Cao, Weizhong  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 9 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO.  | DATE     |
|------------------------|------|----------|------------------|----------|
| CN 1660191             | A    | 20050831 | CN 2004-10047135 | 20041231 |
| PRIORITY APPLN. INFO.: |      |          | CN 2004-10047135 | 20041231 |

AB The oral traditional Chinese medicinal preparation is comprised of rhizoma ligustici wallichii 30-50, radix bupleuri 2-10, dahurian angelica 1-5, cyperus tuber 6-10, white peony root 15-30, bunge cherry seed 2-10, white mustard seed 8-20, and licorice 2-10 %. The preparation process consists of grinding rhizoma ligustici wallichii, cyperus tuber, radix bupleuri, bunge cherry seed and dahurian angelica into raw powder, leaching with ethanol, recovering ethanol, pressure-relief concentrating; adding **water** and decocting medical dregs of rhizoma ligustici wallichii, cyperus tuber, radix bupleuri, bunge cherry seed and dahurian angelica, and addnl. medical materials for two time and 2 h every time, combining the decoction solution, concentrating, adding ethanol to 75 %, depositing for 48 h, recovering ethanol, and pressure-relief concentrating to obtain the **extractum**; combining above **extractum**, concentrating to obtain the **extractum**; or drying **extractum**, and grinding into dried cream powder; and adding proper adjuvant, homogenizing, pelleting, drying, and preparing capsule or enteric capsule, tablet and intumescent tablet. The adjuvant is lactose, starch, sodium carboxymethyl starch, etc., and the weight is 0.0-99.9 % of medicine.

IC ICM A61K035-78

ICS A61K009-48; A61K009-46; A61K009-20; A61P025-04; A61P029-00;  
A61P025-06

CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 1

IT **Drug delivery systems**  
(capsules; oral traditional Chinese medicinal preparation for treating vascular headache and hemicrania)

IT **9004-34-6, Cellulose**, biological studies  
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(microcryst.; oral traditional Chinese medicinal preparation for treating vascular headache and hemicrania)

IT 50-70-4, Sorbitol, biological studies 50-99-7, D-Glucose, biological studies 57-50-1, Sucrose, biological studies 63-42-3, Lactose 69-65-8, Mannitol 471-34-1, Calcium carbonate, biological studies 557-04-0, Magnesium stearate 1309-48-4, Magnesium oxide, biological studies **7647-14-5**, Sodium chloride, biological studies 7757-93-9, Calcium hydrogen phosphate 7778-18-9, Calcium sulfate 9003-39-8, Polyvinylpyrrolidone **9004-32-4**, Carboxymethyl cellulose 9004-53-9, Dextrin **9004-57-3**, Ethyl cellulose **9004-64-2**, Hydroxypropyl cellulose **9004-65-3**, Hydroxypropylmethyl cellulose **9004-67-5**, Methyl cellulose 9005-25-8, Starch, biological studies **9050-04-8**, Calcium carboxymethyl cellulose 9063-38-1, Sodium carboxymethyl starch 10043-35-3, Boric acid, biological studies 14807-96-6, Talc, biological studies 21645-51-2, Aluminum hydroxide, biological studies 25322-68-3, Polyethylene glycol  
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(oral traditional Chinese medicinal preparation for treating vascular headache and hemicrania)

L117 ANSWER 17 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2006:57259 CAPLUS Full-text  
DOCUMENT NUMBER: 144:135298  
TITLE: Targeting bididus microcapsule and its preparation  
INVENTOR(S): Cui, Yunlong  
PATENT ASSIGNEE(S): Beijing Dongfang Baixin Biotechnology Co., Ltd., Peop. Rep. China; Beijing Puerkang Pharmaceutical Hi-Tech Co., Ltd.  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 11 pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO.  | DATE     |
|------------|------|----------|------------------|----------|
| CN 1613455 | A    | 20050511 | CN 2003-10103248 | 20031104 |

PRIORITY APPLN. INFO.: CN 2003-10103248 20031104

AB The targeting bididus microcapsule is comprised of bididus and/or protective agent and trilaminar protective layer. The first layer is primary microcapsule embedding active thallus of bididus after cross linking of protein and transglutaminase. The second layer is ungraded microcapsule embedding with hydrogenated oil and fat and its m.p. is 30-40°. The third layer is primary microcapsule coating with controlled-release coating material. The bididus is from one or more of bacilli and bifidobacterium. The protective agent is one or more of milk powder, defatted milk powder,

trehalose, NaCl, pentitol, amino acid and its salt, glycerin, lactose, starch, sodium Isovitamin C, phosphate, etc. The ratio of bididus and protective agent is 1:0.1-1:20. The primary microcapsule contains defatted milk powder 1-30%, trehalose 2-30%, NaCl 0.1-3%, and glycerin 0.1-1%. The protein is gelatin, milky protein, soybean protein, zein, and collagen, and the dosage is 1-20% amount of fungus powder. The enzyme is transglutaminase, and the dosage is 1-20% amount of primary microcapsule, and the cross linked temperature is 20-70°. The ratio of primary microcapsule and diluent is 1:1-1:200. The controlled-release coating material is from one or more of zein **extract**, sodium alginate, acrylic acid, acrylic acid resin, shellac, hydroxypropyl **methylcellulose**, etc., and the dosage is 1-20% amount of primary microcapsule. The solvent of coating material is one or more of **water**, ethanol, etc. The plasticizer is polyethylene glycol, propylene glycol, glycerin, tri-Et citrate, etc., the dosage is 1-50% amount of coating material. The targeting bididus microcapsule is prepared by the following steps of (1) embedding bididus and/or protective agent with protein after cross linking with transglutaminase, freeze drying to prepare primary microcapsule; (2) mixing primary microcapsule and proper diluent, preparing ungraded microcapsule in coating machine of fluidized-bed with primary microcapsule coating with hydrogenated oil and fat at 20-70°; and (3) coating ungraded microcapsule with controlled-release coating material to prepare the end microcapsule product.

IC ICM A61K035-74  
 ICS A61K009-50; A61P037-04; A61P003-06; A61P035-00; A61P001-00  
 CC 63-6 (Pharmaceuticals)  
 IT **Drug delivery systems**

(**microcapsules**; targeting bididus **microcapsule** and its preparation)  
 IT 79-10-7, Acrylic acid, biological studies 9003-01-4, Acrylic acid resin  
**9004-65-3**, Hydroxypropyl **methylcellulose** 9005-38-3,  
 Sodium alginate  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process);  
 USES (Uses)  
 (targeting bididus microcapsule and its preparation)  
 IT 56-81-5, Glycerin, biological studies 57-55-6, Propylene glycol,  
 biological studies 63-42-3, Lactose 77-93-0, Triethyl citrate  
 99-20-7, Trehalose 6381-77-7, Sodium Isovitamin C 6917-36-8, Pentitol  
**7647-14-5**, Sodium chloride (NaCl), biological studies 9005-25-8,  
 Starch, biological studies 25322-68-3, Polyethylene glycol  
 137741-97-0, Transglutaminase  
 RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)  
 (targeting bididus microcapsule and its preparation)

L117 ANSWER 18 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2004:60341 CAPLUS Full-text  
 DOCUMENT NUMBER: 140:117406  
 TITLE: Liquid dosage compositions of stable nanoparticulate drugs  
 INVENTOR(S): Bosch, William H.; Hilborn, Matthew R.; Hovey, Douglas C.; Kline, Laura J.; Lee, Robert W.; Pruitt, John D.; Ryde, Niels P.; Ryde, Tuula A.; Xu, Shuqian  
 PATENT ASSIGNEE(S): Elan Pharma International, Ltd, Ire.  
 SOURCE: PCT Int. Appl., 68 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 18  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

|   |    |          |                 |            |
|---|----|----------|-----------------|------------|
| WO 2004006959   | A1 | 20040122 | WO 2003-US22187 | 20030716   |
| WO 2004006959   | A8 | 20050331 |                 |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |    |          |                 |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |    |          |                 |            |
| CA 2492488  | A1 | 20040122 | CA 2003-2492488 | 20030716   |
| AU 2003261167   | A1 | 20040202 | AU 2003-261167  | 20030716   |
| EP 1551457  | A1 | 20050713 | EP 2003-764723  | 20030716   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK   |    |          |                 |            |
| JP 2005536512   | T  | 20051202 | JP 2004-521891  | 20030716   |
| PRIORITY APPLN. INFO.:  |    |          | US 2002-396530P | P 20020716 |
|   |    |          | WO 2003-US22187 | W 20030716 |

AB The present invention relates to liquid dosage compns. of stable nanoparticulate drugs. The liquid dosage compns. of the invention include osmotically active crystal growth inhibitors that stabilize the nanoparticulate active agents against crystal and particle size growth of the drug. Thus, an **aqueous** nanoparticulate colloidal dispersion (NCD) comprising drug 32.5 Copovidone 6.5, and dioctyl sodium sulfosuccinate 0.464% by weight was prepared by milling for 3.8 h under high energy milling conditions. The final mean particle size (by weight) of the drug particles was 161 nm. The concentrated NCD was then diluted with preserved **water** and glycerol (the osmotically active crystal growth inhibitor) to 0.5-3.0% drug.

IC ICM A61K047-02  
ICS A61K047-10; A61K047-26; A61K009-10; A61K009-14; A61K031-192; A61K031-58

CC 63-6 (Pharmaceuticals)

IT **Drug delivery systems**  
(**capsules**; liquid dosage compns. of stable nanoparticulate drugs)

IT Fruit  
Vegetable  
(**exts.**; liquid dosage compns. of stable nanoparticulate drugs)

IT 50-35-1, Thalidomide 50-44-2, Mercaptopurine 50-53-3, Chlorpromazine, biological studies 50-78-2, Acetylsalicylic acid 50-99-7, Glucose, biological studies 52-53-9, Verapamil 56-81-5, Glycerol, biological studies 56-85-9, Glutamine, biological studies 57-09-0, Hexadecyltrimethylammonium bromide 57-11-4, Stearic acid, biological studies 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 57-55-6, Propylene glycol, biological studies 57-88-5, Cholesterol, biological studies 58-32-2, Dipyridamole 59-30-3, Folic acid, biological studies 62-49-7D, Choline, esters 63-42-3, Lactose 64-17-5, Ethanol, biological studies 67-45-8, Furazolidone 69-65-8, Mannitol 69-89-6D, Xanthine, derivs. 73-31-4, Melatonin 75-65-0, biological studies 80-74-0, Acetylsulfisoxazole 87-99-0, Xylitol 99-20-7, Trehalose 102-71-6, Triethanolamine, biological studies 110-86-1D, Pyridine, quaternized, salts 112-00-5, Lauryltrimethylammonium chloride 123-03-5, CPC 129-03-3, Cyproheptadine 132-17-2, Benztropine mesylate 134-32-7D, 1-Naphthylamine, alkyldimethylammonium salts 139-07-1, Lauryldimethylbenzylammonium chloride 140-72-7, Cetylpyridinium bromide 143-67-9, Vinblastine sulfate 148-79-8, Thiabendazole 151-21-3, SDS,

biological studies 154-42-7, Thioguanine 288-32-4D, Imidazole, quaternized, salts 303-53-7, Cyclobenzaprine 396-01-0, Triamterene 500-92-5, Proguanil 502-65-8, Lycopene 645-05-6, Altretamine 846-50-4, Temazepam 1119-94-4, Dodecyltrimethylammonium bromide 1119-97-7, Tetradecyltrimethylammonium bromide 1200-22-2, Lipoic acid 1327-43-1, Magnesium aluminum silicate 1592-23-0, Calcium Stearate 1643-19-2, Tetrabutylammonium bromide 1951-25-3, Amiodarone 1977-10-2, Loxapine 2062-78-4, Pimozide 2082-84-0, Decyltrimethylammonium bromide 2609-46-3, Amiloride 3416-24-8, Glucosamine 3458-28-4, Mannose 4205-90-7, Clonidine 4342-03-4, Dacarbazine 5137-55-3, Methyltrioctylammonium chloride 5350-41-4, Benzyltrimethylammonium bromide 7173-51-5, Dimethyldodecylammonium chloride 7281-04-1, Lauryldimethylbenzylammonium bromide 7447-40-7, Potassium chloride (KCl), biological studies 7647-14-5, Sodium chloride, biological studies 7786-30-3, Magnesium chloride (MgCl<sub>2</sub>), biological studies 9000-01-5, Gum acacia 9000-30-0D, Guar gum, cationic derivs. 9000-65-1, Tragacanth gum 9001-63-2, Lysozyme 9002-89-5, Poly(vinyl alcohol) 9003-39-8, Polyvinylpyrrolidone 9004-32-4 9004-34-6, **Cellulose**, biological studies 9004-54-0, Dextran, biological studies 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-65-3, Hypromellose 9004-67-5, Methyl cellulose 9004-99-3, Polyethylene glycol stearate 9005-32-7, Alginic acid 9007-12-9, Calcitonin 9007-27-6, Chondroitin 9011-14-7, Poly(methyl methacrylate) 9011-14-7D, Poly(methyl methacrylate), hydrolyzed, trimethylammonium salts 9050-04-8, **Cellulose**, carboxymethyl ether, calcium salt 9050-31-1, Hydroxypropyl methyl cellulose phthalate 10118-90-8, Minocycline 12441-09-7D, Sorbitan, esters 13292-46-1, Rifampin 16679-58-6, Desmopressin 18186-71-5, Dodecyltriethylammonium bromide 24280-93-1 25086-89-9, Vinyl acetate-1-vinyl-2-pyrrolidone copolymer 25301-02-4, Ethylene oxide-formaldehyde-4-(1,1,3,3-Tetramethylbutyl)phenol copolymer 25322-68-3, Polyethylene glycol 25322-68-3D, Polyethylene glycol, phospholipid derivs. 26062-79-3, Poly(diallyldimethylammonium chloride) 27195-16-0, Sucrose distearate 27321-96-6, Polyethylene glycol cholesteryl ether 28228-56-0 28679-24-5, Dodecylbenzyltriethylammonium chloride 28981-97-7, Alprazolam 29094-61-9, Glipizide 29767-20-2, Teniposide 29836-26-8, n-Octyl- $\beta$ -D-glucopyranoside 31431-39-7, Mebendazole 31566-31-1, Glyceryl monostearate 33419-42-0, Etoposide 34911-55-2, Bupropion 36735-22-5, Quazepam 37318-31-3, Sucrose stearate 38443-60-6, Decyltriethylammonium chloride 39809-25-1, Penciclovir 42399-41-7, Diltiazem 51264-14-3, Amsacrine 51569-39-2, Olin 10G 52128-35-5, Trimetrexate 52467-63-7, Tricetyltrimethylammonium chloride 55008-57-6 55268-75-2, Cefuroxime 55348-40-8, Triton X-200 58846-77-8, n-Decyl  $\beta$ -D-glucopyranoside 59080-45-4, n-Hexyl  $\beta$ -D-glucopyranoside 59122-55-3, n-DoDecyl  $\beta$ -D-glucopyranoside 59277-89-3, Acyclovir 65271-80-9, Mitoxantrone 65277-42-1, Ketoconazole 66085-59-4, Nimodipine 69227-93-6, n-DoDecyl  $\beta$ -D-maltoside 69984-73-2, n-Nonyl  $\beta$ -D-glucopyranoside 70458-96-7, Norfloxacin 72509-76-3, Felodipine 72558-82-8, Ceftazidime 72559-06-9, Rifabutin 73590-58-6, Omeprazole 76095-16-4, Enalapril maleate 76420-72-9, Enalaprilat 76824-35-6, Famotidine 78617-12-6, n-Heptyl  $\beta$ -D-glucopyranoside 79617-96-2, Sertraline 79794-75-5, Loratadine 81098-60-4, Cisapride 81103-11-9, Clarithromycin 81409-90-7, Cabergoline 81859-24-7, Polyquat 10 82494-09-5, n-Decyl  $\beta$ -D-maltoside 84449-90-1, Raloxifene 85261-19-4, Nonanoyl-N-methylglucamide 85261-20-7, Decanoyl-N-methylglucamide 85316-98-9 85618-20-8, n-Heptyl  $\beta$ -D-thioglucopyranoside 85618-21-9, n-Octyl- $\beta$ -D-thioglucopyranoside 85721-33-1,

Ciprofloxacin 86386-73-4, Fluconazole 87679-37-6, Trandolapril 91161-71-6, Terbinafine 95233-18-4, Atovaquone 97322-87-7, Troglitazone 100286-97-3, Milrinone lactate 101397-87-9, D-Glucitol, 1-deoxy-1-[methyl(1-oxoheptyl)amino]- 103577-45-3, Lansoprazole 104987-11-3, Tacrolimus 106266-06-2, Risperidone 106392-12-5, Pluronic 107397-59-1, Tetricnic 150R8 110617-70-4, Poloxamine 113665-84-2, Clopidogrel 115956-12-2, Dolasetron 127666-00-6 127779-20-8, Saquinavir 132539-06-1, Olanzapine 136817-59-9, Delavirdine 138402-11-6, Irbesartan 139481-59-7, Candesartan 139755-83-2, Sildenafil 144034-80-0, Rizatriptan 145599-86-6, Cerivastatin 147059-72-1, Trovafloxacin 159989-65-8, Nelfinavir mesylate 283158-20-3 329326-68-3, p-Isononylphenoxypropylglycidol 503178-50-5 608094-65-1, PEG-vitamin A 630400-66-7 630400-67-8 634601-99-3

RL: **THU (Therapeutic use); BIOL (Biological study); USES (Uses)**  
(liquid dosage compns. of stable nanoparticulate drugs)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L117 ANSWER 19 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2004:1082025 CAPLUS Full-text  
DOCUMENT NUMBER: 142:33043  
TITLE: Porphyrins and metalloporphyrins for inhibiting heme iron uptake  
INVENTOR(S): Bommer, Jerry C.  
PATENT ASSIGNEE(S): Frontier Scientific, Inc., USA  
SOURCE: U.S. Pat. Appl. Publ., 17 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| US 2004254155   | A1   | 20041216 | US 2004-859810  | 20040603   |
| US 7008937  | B2   | 20060307 |                 |            |
| AU 2004247099   | A1   | 20041223 | AU 2004-247099  | 20040604   |
| CA 2528090  | A1   | 20041223 | CA 2004-2528090 | 20040604   |
| WO 2004110377   | A2   | 20041223 | WO 2004-US17828 | 20040604   |
| WO 2004110377   | A3   | 20050811 |                 |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |            |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| EP 1641391  | A2   | 20060405 | EP 2004-754439  | 20040604   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK   |      |          |                 |            |
| BR 2004011123   | A    | 20060718 | BR 2004-11123   | 20040604   |
| PRIORITY APPLN. INFO.:  |      |          | US 2003-477178P | P 20030610 |
|   |      |          | US 2004-859810  | A 20040603 |
|   |      |          | WO 2004-US17828 | W 20040604 |

AB The present invention provides a class of porphyrins and metal chelated porphyrins for use as inhibitors of heme iron uptake. The porphyrin/metal

chelated porphyrin mols. of the invention are tetra-pos. charged porphyrins based on meso-tetra(4-pyridyl)porphines. Several such agents are shown herein to cause inhibition of iron uptake in vivo and in vitro. The invention further provides therapeutic compns. including the porphyrins and/or metalloporphyrins of the invention. In addition, methods of inhibition of heme iron uptake in vivo are taught, as well as methods of treatment of diseases characterized by iron-overload. These methods include the administration of a porphyrin or metalloporphyrin in a therapeutic composition of the invention to prevent uptake of heme iron, thus preventing replenishment of a patient's iron stores.

IC ICM A61K031-555

INCL 514185000; X51-441.0

CC 1-12 (Pharmacology)

Section cross-reference(s): 63

IT **Drug delivery systems**

(capsules; porphyrins and metalloporphyrins for inhibiting heme iron uptake in combination with chelating agent)

IT 57-50-1, Sucrose, biological studies 9003-39-8, Povidone

**9004-32-4, Sodium carboxymethylcellulose**

**9004-57-3, Ethylcellulose 9004-65-3,**

Hydroxypropyl **methylcellulose 9004-67-5,**

**Methylcellulose**

RL: **THU (Therapeutic use); BIOL (Biological study); USES (Uses)**

(binding agent; porphyrins and metalloporphyrins for inhibiting heme iron uptake in combination with chelating agent)

IT **7647-14-5, Sodium chloride, biological studies 9005-25-8,**

Starch, biological studies 9005-32-7, Alginic acid

RL: **THU (Therapeutic use); BIOL (Biological study); USES (Uses)**

(carrier; porphyrins and metalloporphyrins for inhibiting heme iron uptake in combination with chelating agent)

IT **9004-34-6, Cellulose, biological studies**

RL: **THU (Therapeutic use); BIOL (Biological study); USES (Uses)**

(microcryst., carrier; porphyrins and metalloporphyrins for inhibiting heme iron uptake in combination with chelating agent)

IT **7732-18-5, Water, biological studies**

RL: **THU (Therapeutic use); BIOL (Biological study); USES (Uses)**

(pharmaceutical medium; porphyrins and metalloporphyrins for inhibiting heme iron uptake in combination with chelating agent)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L117 ANSWER 20 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:529193 CAPLUS Full-text

DOCUMENT NUMBER: 143:292467

TITLE: Manufacture and detection of medicine containing salidroside for treating coronary heart disease

INVENTOR(S): Xiao, Wei; Yang, Yin; Dai, Xiangling

PATENT ASSIGNEE(S): Jiangsu Kangyuan Pharmaceutical Industry Co., Ltd., Peop. Rep. China

SOURCE: Faming Zhanli Shengqing Gongkai Shuomingshu, No pp. given

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| CN 1526401             | A    | 20040908 | CN 2003-119286  | 20030307 |
| PRIORITY APPLN. INFO.: |      |          | CN 2003-119286  | 20030307 |

AB The title medicine is manufactured from Rhodiola kirilowii through **extn** ., and its active component is salidroside. The salidroside can be identified by thin layer chromatog. (developing agent = Et acetate, methanol and formic acid at a volume ratio of 9:1:0.8; color reagent = 1% FeCl<sub>3</sub> and 1% potassium ferricyanide at a ratio of 1:1), and its content can be detected by high performance liquid chromatog. (filler = octadecyl silane bonded to silica gel; mobile phase = methanol, **water** and glacial acetic acid at a volume ratio of 7:93:1; flowing rate = 9:1:0.8; detection wavelength = 276 nm; column temperature = 40ÅC; number of theoretic column plate>7000).

IC ICM A61K031-7028  
ICS A61K035-78; A61P009-10; G01N033-15; G01N030-02

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

IT **Drug delivery systems**  
(**capsules**; manufacture and detection of medicine containing salidroside for treating coronary heart disease)

IT Antianginal agents  
**Extraction**  
HPLC  
Liquid chromatography  
Sedum kirilowii  
**Solvent extraction**  
TLC (thin layer chromatography)  
Ultrafiltration  
(manufacture and detection of medicine containing salidroside for treating coronary heart disease)

IT 64-17-5, Ethanol, uses 64-18-6, Formic acid, uses 64-19-7, Acetic acid, uses 67-56-1, Methanol, uses 141-78-6, Ethyl acetate, uses 1310-73-2, Sodium hydroxide, uses 7705-08-0, Ferric chloride, uses 9004-32-4, Sodium **carboxymethylcellulose** 13746-66-2, Potassium ferricyanide 18623-11-5, Octadecyl silane  
RL: NUU (Other use, unclassified); USES (Uses)  
(manufacture and detection of medicine containing salidroside for treating coronary heart disease)

IT 7647-14-5, Sodium chloride, biological studies 9005-25-8, Starch, biological studies 9005-65-6, Tween 80  
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)  
(manufacture and detection of medicine containing salidroside for treating coronary heart disease)

L117 ANSWER 21 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2004:1149255 CAPLUS Full-text  
DOCUMENT NUMBER: 142:469192  
TITLE: Ginseng-monkshood controlled-release microcapsule for treating qi asthenia and yang depletion and formulation  
INVENTOR(S): Zeng, Xiaochun  
PATENT ASSIGNEE(S): Sanjiu Pharmaceutical Co., Ltd., Ya'an, Peop. Rep. China  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 47 pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| CN 1488341             | A    | 20040414 | CN 2003-135752  | 20030904 |
| PRIORITY APPLN. INFO.: |      |          | CN 2003-135752  | 20030904 |

AB The ginseng-monkshood composite **extract** is composed of 4.5- 7.5 part Panax ginseng **extract** and 9-15 part Aconitum carmichaeli root **extract**. The ginseng-monkshood composite **extract** is prepared by solvent **extraction** or ultrasonic wave-assisted solvent **extract** of Panax ginseng, Aconitum carmichaeli root, or both, and purified on macroporous resin column. The controlled-release microcapsule of the ginseng-monkshood composite **extract** is prepared by adding the composite **extract** in 30-50 g L-1 gelatin solution (pH 5-7.4) to obtain suspension or O/W type emulsion, adjusting with acetic acid at 50° for pH 3.5-8, and solidifying at pH 8-9. The microcapsule may be prepared by (1) mixing with 5-15% Et **cellulose**/ethanol solution and Mg stearate, and spray freezing via compressed air; (2) adding in CM- **cellulose** solution, agglomerating under dropping Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>, and drying at 80°; (3) suspending the composite **extract** in Na alginate solution, gelatinizing with CaCl<sub>2</sub> solution, vacuum drying at 60° for 12 h; (4) mixing with 25-50 g L-1 gelatin solution and 25-50 g L-1 arabic gum solution to form suspension or O/W type emulsion, adding 50 g L-1 acetic acid at 50-55° to pH 4.0-4.5 to agglomerate, diluting with **water** to precipitate, curing with formaldehyde at pH 8-9, washing with **water** to remove formaldehyde; and (5) adding the composite **extract** in Et **cellulose**/ethanol solution, spray drying to obtain microcapsule, and mixing with antisticking agent (such as talc, Mg stearate, etc). The ginseng-monkshood composite **extract** may be used to prepare other medical formulations (such as tablet, dropping pill, capsule, granule, spray, oral solution, injection, freeze-dried powder injection, transfusion, powder injection, etc).

IC ICM A61K009-52  
ICS A61K035-78; A61P001-14

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

IT **Drug delivery systems**  
(capsules; ginseng-monkshood slow-release microcapsule for treating qi asthenia and yang depletion and formulation)

IT Panax ginseng  
(extract; ginseng-monkshood slow-release microcapsule for treating qi asthenia and yang depletion and formulation)

IT **Drug delivery systems**  
(granules; ginseng-monkshood slow-release microcapsule for treating qi asthenia and yang depletion and formulation)

IT **Drug delivery systems**  
(injections, freeze-dried, powder; ginseng-monkshood slow-release microcapsule for treating qi asthenia and yang depletion and formulation)

IT **Drug delivery systems**  
(injections, i.v.; ginseng-monkshood slow-release microcapsule for treating qi asthenia and yang depletion and formulation)

IT **Drug delivery systems**  
(injections, powder; ginseng-monkshood slow-release microcapsule for treating qi asthenia and yang depletion and formulation)

IT **Drug delivery systems**  
(injections; ginseng-monkshood slow-release microcapsule for treating qi asthenia and yang depletion and formulation)

IT **Drug delivery systems**  
(liqs., oral; ginseng-monkshood slow-release microcapsule for treating qi asthenia and yang depletion and formulation)

IT **Drug delivery systems**  
(microcapsules, controlled-release; ginseng-monkshood slow-release microcapsule for treating qi asthenia and yang depletion and formulation)

IT **Drug delivery systems**  
(powders, freeze-dried injection; ginseng-monkshood slow-release

**microcapsule** for treating qi asthenia and yang depletion and formulation)  
 IT **Drug delivery systems**  
     (powders, injection; ginseng-monkshood slow-release **microcapsule** for treating qi asthenia and yang depletion and formulation)  
 IT Aconitum carmichaelii  
     (root **extract**; ginseng-monkshood slow-release microcapsule for treating qi asthenia and yang depletion and formulation)  
 IT **Drug delivery systems**  
     (sprays; ginseng-monkshood slow-release **microcapsule** for treating qi asthenia and yang depletion and formulation)  
 IT **Drug delivery systems**  
     (tablets, dropping; ginseng-monkshood slow-release **microcapsule** for treating qi asthenia and yang depletion and formulation)  
 IT **Drug delivery systems**  
     (tablets; ginseng-monkshood slow-release **microcapsule** for treating qi asthenia and yang depletion and formulation)  
 IT 56-81-5, Glycerol, biological studies 69-65-8, D-Mannitol 75-71-8, Dichlorodifluoromethane 557-04-0, Magnesium stearate 1309-37-1, Ferric oxide, biological studies 1344-28-1, Alumina, biological studies 7631-86-9, Silica, biological studies 7757-82-6, Sodium sulfate, biological studies 9000-01-5, Arabic gum **9004-32-4**, Carboxymethyl **cellulose** **9004-57-3**, Ethyl **cellulose** 9005-38-3, Sodium alginate 9005-65-6, Tween-80 10043-01-3, Aluminum sulfate **10043-52-4**, Calcium chloride, biological studies 13463-67-7, Titania, biological studies 14807-96-6, Talc, biological studies 25322-68-3, Polyethylene glycol 31566-31-1, Glycerol monostearate  
     RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)  
     (ginseng-monkshood slow-release microcapsule for treating qi asthenia and yang depletion and formulation)

L117 ANSWER 22 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2003:931185 CAPLUS Full-text  
 DOCUMENT NUMBER: 140:744  
 TITLE: 5-HT4 receptor antagonists for the treatment of heart failure  
 INVENTOR(S): Levy, Finn Olav  
 PATENT ASSIGNEE(S): Medinnova SF, Norway; Dzieglewska, Hanna  
 SOURCE: PCT Int. Appl., 68 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.    | KIND   | DATE     | APPLICATION NO. | DATE     |
|---------------|--|----------|-----------------|----------|
| WO 2003097065 | A1   | 20031127 | WO 2003-GB2134  | 20030516 |
| W:            | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |          |                 |          |
| RW:           | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                 |          |

|  |  |  |                 |          |
|--|--|--|-----------------|----------|
| CA 2485600   | A1   | 20031127   | CA 2003-2485600 | 20030516 |
| AU 2003227949  | A1   | 20031202   | AU 2003-227949  | 20030516 |
| EP 1503764   | A1   | 20050209   | EP 2003-725415  | 20030516 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK |  |  |                 |          |
| US 2006094715  | A1   | 20060504   | US 2005-514386  | 20050826 |
| PRIORITY APPLN. INFO.: GB 2002-11230 A 20020516  |  |  |                 |          |
| WO 2003-GB2134 W 20030516  |  |  |                 |          |
| AB   | This invention provides the use of a 5-HT4 receptor antagonist in the manufacture of a medicament for treating or preventing heart failure. Particular heart disorders to be treated are selected from the group comprising chronic heart failure, congestive heart failure, chronic congestive heart failure and heart failure resulting from ischemic heart disease. Methods of treating heart failure using 5-HT4 receptor antagonists and pharmaceutical compns. containing 5-HT4 receptor antagonists are also provided. Treatment of post-infarction congestive heart failure in rats with 5-HT4 receptor antagonist SB207266 showed a trend towards normalization of myocardial function. |  |                 |          |
| IC   | ICM A61K031-5365   |  |                 |          |
| CC   | ICS A61K031-454; A61K031-445; A61P009-04   |  |                 |          |
| CC   | 1-8 (Pharmacology)   |  |                 |          |
| CC   | Section cross-reference(s): 63   |  |                 |          |
| IT   | <b>Drug delivery systems</b><br>(capsules; 5-HT4 receptor antagonists for treatment of heart failure)  |  |                 |          |
| IT   | 63-42-3, Lactose 557-04-0, Magnesium stearate 7647-14-5, Sodium chloride, biological studies 7732-18-5, <b>Water</b> , biological studies  |  |                 |          |
| IT   | RL: <b>THU (Therapeutic use)</b> ; BIOL (Biological study); USES (Uses)<br>(5-HT4 receptor antagonists for treatment of heart failure)   |  |                 |          |
| IT   | 9004-34-6, <b>Cellulose</b> , biological studies   |  |                 |          |
| IT   | RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)<br>(microcryst.; 5-HT4 receptor antagonists for treatment of heart failure)  |  |                 |          |
| REFERENCE COUNT:   | 7  | THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT |                 |          |

L117 ANSWER 23 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:436322 CAPLUS Full-text  
 DOCUMENT NUMBER: 142:487390  
 TITLE: *Chelidonium majus extract, its preparation and application*  
 INVENTOR(S): Zhang, Ping  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhanli Shengqing Gongkai Shuomingshu, 9 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE       |
|------------------------|------|----------|-----------------|------------|
| -----                  | ---- | -----    | -----           | -----      |
| CN 1429611             | A    | 20030716 | CN 2003-101200  | 20030121   |
| PRIORITY APPLN. INFO.: |      |          | CN 2003-101200  | A 20030121 |
|                        |      |          | CN 2002-134733  | 20020913   |

AB The *Chelidonium majus extract* with chelidone content of 0.5-10%, fumarine 0.1-8%, and total alkaloid of 0.6-20% is isolated by *extg* with *water-alc.* under refluxing, concentrating, adjusting with 0.5-1.5M H3PO4 solution to pH 1.5-4.5, precipitating at 5-10° for >10 h, adjusting the filtrate with 5- 40%

NaOH solution to pH 9-11.5, **extg** . with chloroform 2-8 times, concentrating, and vacuum drying. The **ext** . may be used to prepare the antitumor and analgesic medical preps. The injection, powder injection, and capsule of the **extract** were prepared

IC ICM A61K035-78  
ICS A61K031-4355; A61P035-00; A61P029-00; C07D491-153  
CC 63-4 (Pharmaceuticals)  
ST Chelidonium majus **ext** injection antitumor  
IT Antitumor agents  
Chelidonium majus  
(Chelidonium majus **extract** preparation and application)  
IT **Drug delivery systems**  
(**capsules**; Chelidonium majus **extract** preparation and application)  
IT Drug delivery systems  
(injections; Chelidonium majus **extract** preparation and application)  
IT 69-65-8, Mannitol 100-51-6, Benzyl alcohol, biological studies  
117-52-2, Fumarine 476-32-4, Chelidonine 557-04-0, Magnesium stearate  
**7647-14-5**, Sodium chloride, biological studies **9004-32-4**  
, Sodium carboxymethyl **cellulose** 9005-65-6, Tween-80  
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)  
(Chelidonium majus **extract** preparation and application)

L117 ANSWER 24 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:658740 CAPLUS Full-text  
DOCUMENT NUMBER: 137:190770  
TITLE: In-situ gel formation of pectin  
INVENTOR(S): Ni, Yawei; Yates, Kenneth M.  
PATENT ASSIGNEE(S): Carrington Laboratories Inc., USA  
SOURCE: U.S. Pat. Appl. Publ., 17 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

| PATENT NO.             | KIND | DATE   | APPLICATION NO. | DATE       |
|------------------------|------|--|-----------------|------------|
| US 2002119941          | A1   | 20020829   | US 2001-795897  | 20010228   |
| US 6777000             | B2   | 20040817   |                 |            |
| CA 2439570             | A1   | 20020906   | CA 2002-2439570 | 20020227   |
| WO 2002067897          | A2   | 20020906   | WO 2002-US5974  | 20020227   |
| WO 2002067897          | A3   | 20030501   |                 |            |
|                        | W:   | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW |                 |            |
|                        | RW:  | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |                 |            |
| EP 1372606             | A2   | 20040102   | EP 2002-780737  | 20020227   |
|                        | R:   | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |                 |            |
| CN 1531419             | A    | 20040922   | CN 2002-807315  | 20020227   |
| JP 2005506284          | T    | 20050303   | JP 2002-567265  | 20020227   |
| US 2005084534          | A1   | 20050421   | US 2003-652622  | 20030829   |
| PRIORITY APPLN. INFO.: |      |  | US 2001-795897  | A 20010228 |

AB A composition, method of preparation, and a method of use of a pectin in-situ gelling formulation for the delivery and sustained release of a physiol. active agent to the body of an animal are described. The pectin can be isolated from Aloe vera. For example, Aloe pectin preparation (0.5%, weight/volume) in physiol. saline was directly applied to fresh full-thickness excisional skin wounds on mice or rats. A 0.5% (weight/volume) CM-cellulose (CMC) preparation in physiol. saline and a com. hydrogel wound dressing were used as a control. The wounds were made with a biopsy punch in accordance with animal use protocols. After 4 h, rats were sacrificed and wounds surgically removed and examined. A layer of gel was clearly formed on the surface of wounds with the Aloe pectin preparation but not with CMC or the com. hydrogel wound dressing.

IC ICM A61K048-00  
ICS A61K038-00; A61K009-14

INCL 514044000

CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 1

IT **Drug delivery systems**  
(capsules, sustained-release; in-situ gel formation of pectin for sustained drug release)

IT Animals  
Buffers  
Diagnostic agents  
Gelation  
Physiological saline solutions  
Thickening agents  
(in-situ gel formation of pectin for sustained drug release)

IT 7440-23-5D, Sodium, salts 7440-70-2, Calcium, biological studies  
**7647-14-5**, Sodium chloride, biological studies **10043-52-4**  
, Calcium chloride, biological studies  
RL: BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)  
(gelation in presence of; in-situ gel formation of pectin for sustained drug release)

IT **9004-32-4**, Carboxymethyl cellulose sodium 9004-54-0,  
Dextran, biological studies 9004-61-9, Hyaluronic acid **9004-62-0**  
, Hydroxyethyl cellulose **9004-65-3**, Hydroxypropyl  
methyl cellulose 9005-32-7, Alginic acid 9005-38-3, Sodium  
alginate 12619-70-4, Cyclodextrin  
RL: MOA (Modifier or additive use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)  
(thickener; in-situ gel formation of pectin for sustained drug release)

REFERENCE COUNT: 211 THERE ARE 211 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L117 ANSWER 25 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2002:832103 CAPLUS Full-text  
DOCUMENT NUMBER: 139:73897  
TITLE: Characterization of microcapsules: recommended methods based on round-robin testing  
AUTHOR(S): Rosinski, S.; Grigorescu, G.; Lewinska, D.; Ritzen, L. G.; Viernstein, H.; Teunou, E.; Poncelet, D.; Zhang, Z.; Fan, X.; Serp, D.; Marison, I.; Hunkeler, D.  
CORPORATE SOURCE: Institute of Biocybernetics and Biomedical Engineering, Warsaw, Pol.  
SOURCE: Journal of Microencapsulation (2002), 19(5), 641-659  
CODEN: JOMIEF; ISSN: 0265-2048  
PUBLISHER: Taylor & Francis Ltd.

DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Alginate beads, as well as microcapsules based on alginate, **cellulose** sulfate and polymethylene-co-guanidine, were produced at diams. of 0.4, 1.0 and 1.5 mm. These standard materials were tested, by independent labs., in regards to **water activity**, bead or capsule size, mech. resistance and transport behavior. The **water activity** and mech. resistance were observed to increase with bead and capsule size. Transport properties (ingress) were assessed using a variety of low molar mass and macromol. probes. It was observed that the penetration of Vitamin B12 increased with bead diameter, as did dextran penetration. However, for the membrane-containing microcapsules, larger membrane thickness, observed for the larger capsules, retarded ingress. The authors, who are part of a European working group, recommend that permeability be assessed either using a large range of probes or a broad molar mass standard, with measurements at one or two molar masses insufficient to simulate the behavior in application. Mech. compression is seen as a good means to estimate elasticity and rupture of beads and capsules, with the sensitivity of the force transducer, which can vary from  $\mu$ N to tens of N, required to be tuned to the anticipated bead or capsule strength. Overall, with the exception of the mech. properties, the precision in the inter-laboratory testing was good. Furthermore, the various methods of assessing transport properties agreed, in ranking, for the beads and capsules characterized, with gels having smaller radii being less permeable. For microcapsules, the permeation across the membrane dominates the ingress, and thicker membranes have lower permeability.

CC 63-6 (Pharmaceuticals)  
ST alginate **cellulose** Vitamin B12 microcapsule bead  
IT **Drug delivery systems**  
    (beads; characterization of **microcapsules**)  
IT **Drug delivery systems**  
    (**microcapsules**; characterization of **microcapsules**)  
IT 68-19-9, Vitamin B12 9004-54-0, Dextran, biological studies  
9005-22-5, Sodium **cellulose** sulfate 9005-38-3, Sodium  
alginate 10043-52-4, Calcium chloride, biological studies  
55295-98-2  
RL: PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological  
study); USES (Uses)  
    (characterization of microcapsules)  
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L117 ANSWER 26 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1996:135969 CAPLUS Full-text  
DOCUMENT NUMBER: 124:185620  
TITLE: A method for treating capsules used for drug storage  
INVENTOR(S): Clark, Andrew R.; Gonda, Igor  
PATENT ASSIGNEE(S): Genentech, Inc., USA  
SOURCE: PCT Int. Appl., 20 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| WO 9601105   | A1   | 19960118 | WO 1995-US8310  | 19950629 |
| W: CA, JP, MX  |      |          |                 |          |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE |      |          |                 |          |
| US 5641510   | A    | 19970624 | US 1994-270195  | 19940701 |

|   |    |          |                 |            |
|---|----|----------|-----------------|------------|
| CA 2191709  | A1 | 19960118 | CA 1995-2191709 | 19950629   |
| EP 768873   | A1 | 19970423 | EP 1995-925430  | 19950629   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE |    |          |                 |            |
| JP 10502283   | T  | 19980303 | JP 1995-503945  | 19950629   |
| PRIORITY APPLN. INFO.:  |    |          | US 1994-270195  | A 19940701 |
|   |    |          | WO 1995-US8310  | W 19950629 |

AB Capsules (such as hard gelatin, **cellulose** and plastic capsules) containing pharmaceutical powders which are administered to a patient via inhalation are treated so as to increase the effective amount of the pharmaceutical agent reaching the respiratory system of the patient. The capsules are coated internally with a lubricant during manufacture and in one aspect, the method involves exposing the lubricant-coated inner surface of the capsule to a pharmaceutically acceptable solvent which dissolves the lubricant. Generally, the solvent is volatile, and bactericidal (e.g. ethanol). The pharmaceutical powder is inserted in the capsule following this washing procedure. Alternatively, the lubricant-coated capsule is dusted internally with a dusting agent such as a salt (e.g. sodium chloride) or a sugar (e.g. lactose, mannitol, trehalose or sucrose) prior to inserting the pharmaceutical powder inside the capsule. The invention also pertains to a capsule, optionally containing the pharmaceutical powder therein, which has been treated according to the methods discussed above.

IC ICM A61K009-48

ICS A61J003-07

CC 63-6 (Pharmaceuticals)

IT **Pharmaceutical dosage forms**

(**capsules**, lubricant-treated **capsules** for drug storage and their preparation)

IT 50-70-4, Sorbitol, biological studies 50-99-7, Dextrose, biological studies 56-23-5, Carbon tetrachloride, biological studies 57-11-4, Stearic acid, biological studies 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 63-42-3, Lactose 64-17-5, Ethanol, biological studies 67-56-1, Methanol, biological studies 67-63-0, IsoPropanol, biological studies 67-66-3, Chloroform, biological studies 69-65-8, Mannitol 69-79-4, Maltose 71-23-8, Propanol, biological studies 71-43-2, Benzene, biological studies 87-99-0, Xylitol 99-20-7, Trehalose 111-27-3, Hexanol, biological studies 143-07-7, Lauric acid, biological studies 147-81-9, Arabinose 151-21-3, Sodium lauryl sulfate, biological studies 532-32-1, Sodium benzoate 557-04-0, Magnesium stearate 637-12-7, Aluminum stearate 1592-23-0, Calcium stearate 3097-08-3, Magnesium lauryl sulfate 7447-40-7, Potassium chloride, biological studies 7647-14-5, Sodium chloride, biological studies 7732-18-5, Water, biological studies 9004-34-6, **Cellulose**, biological studies 9004-53-9, Dextrin 9004-54-0, Dextran, biological studies 9004-67-5, Methyl **Cellulose** 9005-25-8, Starch, biological studies 10043-35-3, Boric acid, biological studies 25322-68-3, Polyethylene glycol

RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses) (lubricant-treated capsules for drug storage and their preparation)

L117 ANSWER 27 OF 62

MEDLINE on STN

DUPLICATE 2

ACCESSION NUMBER: 2003291945 MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 12818816

TITLE: Preparation and evaluation of sustained release microspheres of potassium chloride prepared with **ethylcellulose**.

AUTHOR: Wu Pao-Chu; Huang Yaw-Bin; Chang Jui-I; Tsai Ming-Jun; Tsai

CORPORATE SOURCE: Yi-Hung  
School of Pharmacy, Kaohsiung Medical University, 100  
Shih-Chen 1st Road, Kaohsiung 807, Taiwan, ROC.

SOURCE: International journal of pharmaceutics, (2003 Jul 9) Vol.  
260, No. 1, pp. 115-21.  
Journal code: 7804127. ISSN: 0378-5173.

PUB. COUNTRY: Netherlands  
DOCUMENT TYPE: (COMPARATIVE STUDY)  
(Journal; Article; (JOURNAL ARTICLE)  
(RESEARCH SUPPORT, NON-U.S. GOV'T)

LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200309  
ENTRY DATE: Entered STN: 24 Jun 2003  
Last Updated on STN: 23 Sep 2003  
Entered Medline: 22 Sep 2003

ABSTRACT:

The water-insoluble polymer **ethylcellulose** is used as a retardant to prepare the sustained release of potassium chloride microspheres by drying in a liquid process. The effect of sustained release of potassium from **ethylcellulose** microspheres was evaluated by the in vitro dissolution test, and was compared to a commercial product (Slow-K). The results showed that **ethylcellulose** microspheres loaded with potassium chloride could be easily prepared and satisfactory results could be obtained considering size distribution and shapes of microspheres by incorporating aluminum stearate. The **encapsulation** efficiency and loading capacity were about 84-93 and 36%, respectively. However, the potassium/**ethylcellulose** 2/2 (30-45 mesh) microspheres showed the similar sustained release effect of commercial product.

CONTROLLED TERM: Acrylic Resins: CH, chemistry  
\*Cellulose: AA, analogs & derivatives  
\*Cellulose: CH, chemistry  
Delayed-Action Preparations  
Drug Carriers  
Kinetics  
Microscopy, Electron, Scanning  
Microspheres  
Particle Size  
Potassium Chloride: AD, administration & dosage  
\*Potassium Chloride: CH, chemistry  
Solubility  
Stearic Acids: CH, chemistry  
Surface Properties  
Technology, Pharmaceutical

CAS REGISTRY NO.: 33434-24-1 (Eudragit RS); 57-11-4 (stearic acid); 7447-40-7  
(Potassium Chloride); 9004-34-6 (Cellulose);  
9004-57-3 (ethyl cellulose)

CHEMICAL NAME: 0 (Acrylic Resins); 0 (Delayed-Action Preparations); 0  
(Drug Carriers); 0 (Stearic Acids)

L117 ANSWER 28 OF 62 MEDLINE on STN DUPLICATE 3  
ACCESSION NUMBER: 2000426323 MEDLINE Full-text  
DOCUMENT NUMBER: PubMed ID: 10825563  
TITLE: Monolithic osmotic tablet system for nifedipine delivery.  
AUTHOR: Liu L; Khang G; Rhee J M; Lee H B  
CORPORATE SOURCE: Department of Polymer Science and Technology, Chonbuk  
National University, 664-14 Dukjin Dong, Dukjin Ku,  
561-756, Chonju, South Korea.  
SOURCE: Journal of controlled release : official journal of the  
Controlled Release Society, (2000 Jul 3) Vol. 67, No. 2-3,

pp. 309-22.  
Journal code: 8607908. ISSN: 0168-3659.  
PUB. COUNTRY: Netherlands  
DOCUMENT TYPE: (COMPARATIVE STUDY)  
Journal; Article; (JOURNAL ARTICLE)  
(RESEARCH SUPPORT, NON-U.S. GOV'T)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200009  
ENTRY DATE: Entered STN: 22 Sep 2000  
Last Updated on STN: 22 Sep 2000  
Entered Medline: 14 Sep 2000

ABSTRACT:

The monolithic osmotic tablet system, which is composed of a monolithic tablet coated with **cellulose** acetate (CA) membrane drilled with two orifices on both side surfaces, has been described. The influences of tablet formulation variables including molecular weight (MW) and amount of polyethylene oxide (PEO), amount of potassium chloride (KCl), and amount of rice starch as well as nifedipine loading have been investigated. The optimal tablet formulation and the osmotic-suspending co-controlled delivery mechanisms have been proposed. Orifice size and membrane variables including nature and amount of plasticizers as well as thickness on drug release have also been studied. The in vitro release profiles of the optimal system have been evaluated in various release media and different agitation rates, and compared with commercialized conventional **capsule** and push-pull osmotic tablet. It was found that PEO with MW of 300000 g/mol was suitable to be thickening agent, both amount of KCl and amount of PEO had comparable and profoundly positive effects, while nifedipine loading had a strikingly negative influence on drug release. It could be found that the optimal orifice size was in the range of 0.25-1.41 mm. It has also been observed that hydrophilic plasticizer polyethylene glycol (PEG) improved drug release, whereas hydrophobic plasticizer triacetin depressed drug release when they were incorporated in CA membrane. The monolithic osmotic tablet system was found to be able to deliver nifedipine at the rate of approximate zero-order up to 24 h, independent of both environmental media and agitation rate, and substantially comparable with the push-pull osmotic tablet. The monolithic osmotic tablet system was simple to be prepared as exempting from push layer and simplifying in the orifice drilling compared with the push-pull osmotic tablet. The monolithic osmotic tablet system may be used in drug controlled delivery field, especially suitable for **water-insoluble** drugs.

CONTROLLED TERM: \*Calcium Channel Blockers: AD, administration & dosage  
Calcium Channel Blockers: AN, analysis

**Capsules**

**Cellulose: AA, analogs & derivatives**

Chromatography, High Pressure Liquid

Excipients

Molecular Weight

Multivariate Analysis

\*Nifedipine: AD, administration & dosage

Nifedipine: AN, analysis

Osmosis

Polyethylene Glycols

**Potassium Chloride**

Solubility

Tablets

CAS REGISTRY NO.: 21829-25-4 (Nifedipine); 7447-40-7 (Potassium Chloride);  
9004-34-6 (Cellulose); 9004-35-7  
(acetylcellulose)

CHEMICAL NAME: 0 (Calcium Channel Blockers); 0 (**Capsules**); 0  
(Excipients); 0 (Polyethylene Glycols); 0 (Tablets)

L117 ANSWER 29 OF 62 MEDLINE on STN DUPLICATE 5  
ACCESSION NUMBER: 1998416563 MEDLINE Full-text  
DOCUMENT NUMBER: PubMed ID: 9743921  
TITLE: Influence of dextran molecular weight on capture in and release from decylamine **carboxymethylcellulose capsules**.  
AUTHOR: Mathew E; Speaker T J  
CORPORATE SOURCE: Temple University School of Pharmacy, Philadelphia, PA 19140, USA.  
SOURCE: Journal of microencapsulation, (1998 Sep-Oct) Vol. 15, No. 5, pp. 675-80.  
Journal code: 8500513. ISSN: 0265-2048.  
PUB. COUNTRY: ENGLAND: United Kingdom  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199811  
ENTRY DATE: Entered STN: 6 Jan 1999  
Last Updated on STN: 6 Jan 1999  
Entered Medline: 18 Nov 1998

ABSTRACT:  
A series of dextran molecular weight markers were **encapsulated** in decylamine **carboxymethylcellulose microcapsules** to serve as probes of **capsule** retentivity. The **capsules** were prepared by allowing microdrops of **aqueous** sodium \*\*\*carboxymethylcellulose\*\*\* to fall into **aqueous** decylamine acetate **solution**. **Salt** exchange reaction at the droplet pseudointerface resulted in self-assembling films which essentially instantaneously enclosed the droplets. Concentrations of anionic polymer were varied in the range from 1-3%. Chromophore-bearing dextrans were incorporated into these **capsules** by blending the dextrans with the \*\*\*carboxymethylcellulose\*\*\* prior to the **encapsulation** step. Four dextrans of differing (light scattering) molecular weights were used: 2 x 10(6), 6 x 10(5), 7 x 10(4), and 1.9 x 10(4) amu. The mass balance of dextran retained in the **capsules**, released on washing the **capsules** or which escaped **encapsulation** was determined spectrophotometrically. To measure total dextran in a population of washed **capsules**, the \*\*\*capsules\*\*\* were lysed in a 0.3 M **solution** of sodium \*\*\*chloride.\*\*\* To monitor dextran release, washed **capsules** were suspended in **water** and dextran concentration in the supernatant was measured. **Encapsulation** efficiency exceeded 80% for high molecular weight dextran but was lower with the smaller dextrans.

CONTROLLED TERM: Adsorption  
\*Amines: CH, chemistry  
    **Capsules**  
    \***Carboxymethylcellulose**: CH, chemistry  
    Chemistry, Pharmaceutical: MT, methods  
\*Dextrans: CH, chemistry  
    Fluorescein-5-isothiocyanate: AA, analogs & derivatives  
    Fluorescein-5-isothiocyanate: CH, chemistry  
    Kinetics  
    Molecular Weight  
\*Pharmaceutic Aids: CH, chemistry  
CAS REGISTRY NO.: 2016-57-1 (decylamine); 3326-32-7 (Fluorescein-5-isothiocyanate); 9004-32-4 (**Carboxymethylcellulose**); 9004-54-0 (Dextrans)  
CHEMICAL NAME: 0 (Amines); 0 (**Capsules**); 0 (Pharmaceutic Aids); 0 (fluorescein isothiocyanate dextran)

L117 ANSWER 30 OF 62 MEDLINE on STN DUPLICATE 7  
ACCESSION NUMBER: 97059461 MEDLINE Full-text  
DOCUMENT NUMBER: PubMed ID: 8903782  
TITLE: Pesticide and model drug release from carboxymethylcellulose  
microspheres.  
AUTHOR: Darvari R; Hasirci V  
CORPORATE SOURCE: Middle East Technical University, Department of Biological  
Sciences, Biotechnology Research Unit, Ankara, Turkey.  
SOURCE: Journal of microencapsulation, (1996 Jan-Feb) Vol. 13, No.  
1, pp. 9-24.  
PUB. COUNTRY: Journal code: 8500513. ISSN: 0265-2048.  
ENGLAND: United Kingdom  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199702  
ENTRY DATE: Entered STN: 27 Feb 1997  
Last Updated on STN: 27 Feb 1997  
Entered Medline: 13 Feb 1997

ABSTRACT:  
Water soluble derivatives of **cellulose** are widely used in various biomedical and biotechnological applications. Sodium carboxymethyl \*\*\*cellulose\*\*\* was insolubilized in the form of microspheres using aluminium chloride as the crosslinking agent. It was observed that, depending on the preparation medium pH, the spherical product could either be a microsphere with an ionotropic interior or a **microcapsule**. Various microspheres with different crosslinker, biopolymer, and drug (2',7'-dichlorofluorescein and aldicarb) contents were prepared and their structures, properties, swelling behaviour and release kinetics investigated. The release kinetics could not be described by typical Fickian or non-Fickian approaches.

CONTROLLED TERM: Aldicarb: ME, metabolism  
Aldicarb: PD, pharmacology  
Aluminum Compounds: PD, pharmacology  
**\*Carboxymethylcellulose: ME, metabolism**

**Chlorides: PD, pharmacology**

Contraceptive Agents: CH, chemistry  
Contraceptive Agents: ME, metabolism  
Cross-Linking Reagents: ME, metabolism

**\*Drug Compounding**

Fluoresceins: ME, metabolism

Hydrogen-Ion Concentration

Kinetics

Microscopy

Microscopy, Electron, Scanning

**\*Microspheres**

**\*Pesticides: ME, metabolism**

Spectrophotometry, Infrared

CAS REGISTRY NO.: 116-06-3 (Aldicarb); 7446-70-0 (aluminum chloride);  
**9004-32-4 (Carboxymethylcellulose)**

CHEMICAL NAME: 0 (Aluminum Compounds); 0 (Chlorides); 0 (Contraceptive Agents); 0 (Cross-Linking Reagents); 0 (Fluoresceins); 0 (Pesticides)

L117 ANSWER 31 OF 62 MEDLINE on STN DUPLICATE 11  
ACCESSION NUMBER: 93187822 MEDLINE Full-text  
DOCUMENT NUMBER: PubMed ID: 8445534  
TITLE: **Microencapsulation** of drugs with aqueous  
colloidal polymer dispersions.  
AUTHOR: Bodmeier R; Wang J  
CORPORATE SOURCE: College of Pharmacy, University of Texas, Austin

78712-1074.  
SOURCE: Journal of pharmaceutical sciences, (1993 Feb) Vol. 82, No. 2, pp. 191-4.  
Journal code: 2985195R. ISSN: 0022-3549.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199304  
ENTRY DATE: Entered STN: 16 Apr 1993  
Last Updated on STN: 16 Apr 1993  
Entered Medline: 5 Apr 1993

ABSTRACT:  
Sustained-release polymer particles containing drugs with various solubility characteristics (ibuprofen, theophylline, guaifenesin, and pseudoephedrine HCl) were prepared with colloidal polymer dispersions in a completely \*\*\*aqueous\*\*\* environment as an alternative to conventional \*\*\*microencapsulation\*\*\* techniques, which use organic solvents. Spherical particles were prepared by spraying or dropping dilute sodium alginate \*\*\*solutions\*\*\* (0.67%, w/w) containing the dissolved or dispersed drug and colloidal polymer particles into **calcium chloride** \*\*\*solutions.\*\*\* The gelled particles, which formed by ionotropic gelation of the polysaccharide with calcium ions, were dried and cured at 60 degrees C to cause fusion of the colloidal polymer particles into a homogeneous matrix system. Actual drug contents close to 50% and **encapsulation** efficiencies of between 80 and 98% were achieved with all drugs. Guaifenesin and ibuprofen acted as plasticizers for the ethyl **cellulose** pseudolatex, whereas with theophylline and pseudoephedrine HCl, dibutyl sebacate had to be added as a plasticizer to yield a nondisintegrating polymer matrix. The stirring time before separation of the particles from the gelation medium had to be minimized with the **water**-soluble drugs to maximize drug loading; however, it was not critical with the **water**-insoluble drugs. Drug release was a function of the solubility of the drug, drug loading, and the type of polymer dispersion used.

CONTROLLED TERM: \***Capsules**  
Colloids  
Delayed-Action Preparations  
Ephedrine: PK, pharmacokinetics  
Excipients  
Guaifenesin: PK, pharmacokinetics  
Ibuprofen: PK, pharmacokinetics  
Microspheres  
Solubility  
Theophylline: PK, pharmacokinetics  
CAS REGISTRY NO.: 15687-27-1 (Ibuprofen); 299-42-3 (Ephedrine); 58-55-9 (Theophylline); 93-14-1 (Guaifenesin)  
CHEMICAL NAME: 0 (**Capsules**); 0 (Colloids); 0 (Delayed-Action Preparations); 0 (Excipients)

L117 ANSWER 32 OF 62 MEDLINE on STN  
ACCESSION NUMBER: 2005635310 MEDLINE Full-text  
DOCUMENT NUMBER: PubMed ID: 16315983  
TITLE: *Clostridium alkalicellum* sp. nov., an obligately alkaliphilic cellulolytic bacterium from a soda lake in the Baikal region.  
AUTHOR: Zhilina T N; Kevbrin V V; Turova T P; Lysenko A M; Kostrikina N A; Zavarzin G A  
SOURCE: Mikrobiologiya, (2005 Sep-Oct) Vol. 74, No. 5, pp. 642-53.  
Journal code: 0376652. ISSN: 0026-3656.  
PUB. COUNTRY: Russia (Federation)

DOCUMENT TYPE: (ENGLISH ABSTRACT)  
Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: Russian  
FILE SEGMENT: Priority Journals  
OTHER SOURCE: GENBANK-AY959944  
ENTRY MONTH: 200512  
ENTRY DATE: Entered STN: 1 Dec 2005  
Last Updated on STN: 23 Dec 2005  
Entered Medline: 22 Dec 2005

ABSTRACT:

The first anaerobic alkaliphilic cellulolytic microorganism has been isolated from the Verkhnee Beloe soda lake (Buryatiya, Russia) with pH 10.2 and a \*\*\*salt\*\*\* content of up to 24 g/l. Five strains were characterized. Strain Z-7026 was chosen as the type strain. The cells of the isolate are gram-positive spore-forming rods. A mucous external **capsule** is produced. The microorganism is obligately alkaliphilic, growing in a pH range of 8.0-10.2, with an optimum at pH 9.0. Sodium ions and, in carbonate-buffered media, **sodium chloride** are obligately required. The microorganism is slightly halophilic; it grows at 0.017-0.4 M Na<sup>+</sup> with an optimum at 0.15-0.3 M Na<sup>+</sup>. The metabolism is fermentative and strictly anaerobic. **Cellulose**, cellobiose, and xylan can be used as growth substrates. Plant and algal debris can be fermented. Lactate, ethanol, acetate, hydrogen, and traces of formate are produced during **cellulose** or cellobiose fermentation. Yeast **extract** or vitamins are required for anabolic purposes. The microorganism fixes dinitrogen and is nitrogenase-positive. It is tolerant to up to 48 mM Na<sub>2</sub>S. Growth is not inhibited by kanamycin or neomycin. Chloramphenicol, streptomycin, penicillin, ampicillin, ampiox, bacillin, novobiocin, and bacitracin suppress growth. The DNA G+C content is 29.9 mol %. According to the nucleotide sequence of its 16S rRNA gene, strain Z-7026 is phylogenetically close to the neutrophilic cellulolytic bacteria *Clostridium thermocellum* (95.5%), *C. aldrichii* (94.9%), and *Acetivibrio cellulolyticus* (94.8%). It is proposed as a new species: *Clostridium alkalicellum* sp. nov.

CONTROLLED TERM: Anaerobiosis  
Anti-Bacterial Agents: PD, pharmacology  
Base Composition  
\***Cellulose: ME, metabolism**  
Chloramphenicol: PD, pharmacology  
*Clostridium*: CL, classification  
*Clostridium*: DE, drug effects  
\**Clostridium*: IP, isolation & purification  
\**Clostridium*: PH, physiology  
Culture Media  
DNA, Bacterial: GE, genetics  
Fermentation  
\***Fresh Water: MI, microbiology**  
Hydrogen-Ion Concentration  
Molecular Sequence Data  
Nitrogenase: ME, metabolism  
Phylogeny  
RNA, Bacterial: AN, analysis  
RNA, Ribosomal, 16S: AN, analysis  
Russia  
Species Specificity  
Substrate Specificity  
\***Water Microbiology**  
CAS REGISTRY NO.: 56-75-7 (Chloramphenicol); 9004-34-6 (**Cellulose**)  
CHEMICAL NAME: 0 (Anti-Bacterial Agents); 0 (Culture Media); 0 (DNA, Bacterial); 0 (RNA, Bacterial); 0 (RNA, Ribosomal, 16S); EC 1.18.6.1 (Nitrogenase)

L117 ANSWER 33 OF 62 MEDLINE on STN  
ACCESSION NUMBER: 2004332268 MEDLINE Full-text  
DOCUMENT NUMBER: PubMed ID: 15236252  
TITLE: Gelation conditions and transport properties of hollow calcium alginate **capsules**.  
AUTHOR: Chai Yi; Mei Le-He; Wu Guo-Liang; Lin Dong-Qiang; Yao Shan-Jing  
CORPORATE SOURCE: Department of Chemical and Biochemical Engineering, Zhejiang University, Hangzhou, China.  
SOURCE: Biotechnology and bioengineering, (2004 Jul 20) Vol. 87, No. 2, pp. 228-33.  
Journal code: 7502021. ISSN: 0006-3592.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
(RESEARCH SUPPORT, NON-U.S. GOV'T)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200503  
ENTRY DATE: Entered STN: 7 Jul 2004  
Last Updated on STN: 22 Mar 2005  
Entered Medline: 21 Mar 2005

**ABSTRACT:**  
The diameter, membrane thickness, and compression intensity of hollow Ca-alginate **capsules** were measured at different gelation conditions, such as the reactant concentration, dropping velocity, and gelation time. The optimum operation conditions for preparing **capsules** were determined at 100 g/L CaCl<sub>2</sub>, 10 g/L sodium alginate (Na-alginate), a dropping velocity of 150 droplets/min, and a gelation time of 10 min. Diffusion of some saccharide and amino acid from bulk **solution** into **capsules** was investigated, and the diffusion coefficients were calculated by the developed mathematical model. All the tested substances can diffuse easily into the **capsules**. The combined diffusion coefficients of the \*\*\*capsule\*\*\* D(m) are 92-99% as large as their diffusion coefficients in pure **water**, while the diffusion coefficients in the **capsule** membrane D(1) are 60-95% as large as those. By employing polyethylene glycol (PEG) and bovine serum albumin (fraction V) (BSA(V)), the molecular weight cut-off of the **capsule** was determined. For linear macromolecules, hollow Ca-alginate **capsules** have a molecular weight cut-off of 4000. No diffusion of BSA(V) into the **capsules** was observed.

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CONTROLLED TERM: \*Algionates: CH, chemistry  
Amino Acids: CH, chemistry  
\*Biocompatible Materials: CH, chemistry  
    **Calcium Chloride: CH, chemistry**  
    **Capsules: CH, chemistry**  
    **Carboxymethylcellulose: CH, chemistry**  
Compressive Strength  
Diffusion  
Diffusion Chambers, Culture  
Glucose: CH, chemistry  
\*Glucuronic Acid: CH, chemistry  
\*Hexuronic Acids: CH, chemistry  
Lactose: CH, chemistry  
Membranes, Artificial  
Permeability  
Polyethylene Glycols: CH, chemistry  
Time Factors

CAS REGISTRY NO.: 10043-52-4 (**Calcium Chloride**); 50-99-7 (Glucose); 576-37-4 (Glucuronic Acid); 63-42-3 (Lactose);

9004-32-4 (Carboxymethylcellulose); 9005-32-7  
(alginic acid)

CHEMICAL NAME: 0 (Alginates); 0 (Amino Acids); 0 (Biocompatible Materials); 0 (**Capsules**); 0 (Hexuronic Acids); 0 (Membranes, Artificial); 0 (Polyethylene Glycols)

L117 ANSWER 34 OF 62 MEDLINE on STN

ACCESSION NUMBER: 2003375463 MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 12909544

TITLE: Influence of alginic characteristics on the properties of multi-component **microcapsules**.

AUTHOR: Wandrey C; Espinosa D; Rehor A; Hunkele D

CORPORATE SOURCE: Institute of Chemical and Biological Process Science, Swiss Federal Institute of Technology, Lausanne, Switzerland..  
christine.wandrey@epfl.ch

SOURCE: Journal of microencapsulation, (2003 Sep-Oct) Vol. 20, No. 5, pp. 597-611.

Journal code: 8500513. ISSN: 0265-2048.

PUB. COUNTRY: England: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
(RESEARCH SUPPORT, NON-U.S. GOV'T)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200311

ENTRY DATE: Entered STN: 12 Aug 2003

Last Updated on STN: 7 Nov 2003

Entered Medline: 6 Nov 2003

ABSTRACT:

A variety of sodium alginates, differing in molar mass and structural composition, have been evaluated in the preparation of multi-component microbeads and **microcapsules**. Bead formation occurred by gelation with **calcium chloride**. **Capsules** were produced by reacting the pre-formed beads with the oligocation poly(methylene-co-guanidine). Despite the equiponderous (1:1) mixing with a second polyanion, sodium **cellulose** sulphate, the influence of the alginic properties remains evident. Specifically, the effect of the chemical composition was found to be more significant than that of the molar mass for both the mechanical and transport properties. Furthermore, for alginates of 73% alpha-1-guluronic acid content less shrinking was observed compared to the 38% guluronic materials. This results in the case of the same **encapsulator** settings in larger microsphere diameters and thicker membranes accompanied by enhanced mechanical resistance though, also, in a higher permeability for the high-G **capsules**. However, subsequent coating with lower molar mass alginic allows one to adjust the permeability over a broad range, suitable for cell **encapsulation** and immunoprotection, without compromising the durability.

CONTROLLED TERM: \*Alginates: CH, chemistry

Biocompatible Materials

Calcium

**Capsules**

Dextrans

Drug Compounding: MT, methods

Microspheres

Particle Size

Permeability

Photomicrography: MT, methods

Polymers

Sodium

**Solutions**

Viscosity

CAS REGISTRY NO.: 7440-23-5 (Sodium); 7440-70-2 (Calcium); 9004-54-0

(Dextrans)

CHEMICAL NAME: 0 (Alginates); 0 (Biocompatible Materials); 0 (Capsules); 0 (Polymers); 0 (Solutions)

L117 ANSWER 35 OF 62 MEDLINE on STN

ACCESSION NUMBER: 2003176976 MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 12695062

TITLE: A novel pulsed-release system based on swelling and osmotic pumping mechanism.

AUTHOR: Zhang Yan; Zhang Zhirong; Wu Fang

CORPORATE SOURCE: West China School of Pharmacy, Sichuan University, No. 17, Section 3, Renmin Nan Road, 610041, Chengdu, China.

SOURCE: Journal of controlled release : official journal of the Controlled Release Society, (2003 Apr 14) Vol. 89, No. 1, pp. 47-55.

JOURNAL CODE: 8607908. ISSN: 0168-3659.

PUB. COUNTRY: Netherlands

DOCUMENT TYPE: (IN VITRO)

Journal; Article; (JOURNAL ARTICLE)  
(RESEARCH SUPPORT, NON-U.S. GOV'T)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200401

ENTRY DATE: Entered STN: 17 Apr 2003

Last Updated on STN: 13 Jan 2004

Entered Medline: 12 Jan 2004

ABSTRACT:

A novel pulsed-release system based on bilayer coated tablets containing an osmotically active agent is presented. *Hydroxypropylmethylcellulose* (HPMC) and the mixture of Eudragit RS and RL were applied as the swelling layer and semipermeable outer coat, respectively. To examine the mechanism of drug release from this pulsed-release system, drug release behaviors were investigated under conditions of various osmotic pressures. Both lag time and release rate were dependent on the coating level and the osmotic pressure of the dissolution medium. The swelling of tablets and the dynamics of \*\*\*water\*\*\* uptake during the dissolution were investigated to further elucidate the mechanism of drug release. The osmotic active agent induces a continuous **water** influx resulting in a rapid expansion of the membrane. The subsequent formation of fractures leads to a fast drug release after an initial lag time. All the results obtained in the present study indicated that both diffusion and osmotic pumping effect were involved in drug release from the device, but the latter was more dominant.

CONTROLLED TERM: **Capsules**

\*Delayed-Action Preparations: CH, chemistry

\*Delayed-Action Preparations: PK, pharmacokinetics  
Diffusion

\*Drug Delivery Systems: MT, methods  
Hydrogen-Ion Concentration

\**Methylcellulose*: AA, analogs & derivatives

*Methylcellulose*: CH, chemistry

*Methylcellulose*: PK, pharmacokinetics

Osmotic Pressure

Polymers: CH, chemistry

Polymethacrylic Acids: CH, chemistry

Polymethacrylic Acids: PK, pharmacokinetics

Pulse Therapy, Drug: MT, methods

*Sodium Chloride*: CH, chemistry

*Sodium Chloride*: PK, pharmacokinetics

Solubility

Tablets  
\*Technology, Pharmaceutical: MT, methods  
Terbutaline: CH, chemistry  
\*Terbutaline: PK, pharmacokinetics  
Time Factors  
CAS REGISTRY NO.: 23031-25-6 (Terbutaline); 25086-15-1 (methylmethacrylate-methacrylic acid copolymer); 7647-14-5 (Sodium Chloride); 9004-67-5 (Methylcellulose)  
CHEMICAL NAME: 0 (Capsules); 0 (Delayed-Action Preparations); 0 (Polymers); 0 (Polymethacrylic Acids); 0 (Tablets)

L117 ANSWER 36 OF 62 MEDLINE on STN  
ACCESSION NUMBER: 2002148526 MEDLINE Full-text  
DOCUMENT NUMBER: PubMed ID: 11853927  
TITLE: Modulation of active pharmaceutical material release from a novel 'tablet in capsule system' containing an effervescent blend.  
AUTHOR: Gohel Mukesh C; Sumitra G Manhapra  
CORPORATE SOURCE: Department of Pharmaceutics and Pharmaceutical Technology, L.M. College of Pharmacy, Ahmedabad 380 009, Gujarat, India.. mukeshgohel@hotmail.com  
SOURCE: Journal of controlled release : official journal of the Controlled Release Society, (2002 Feb 19) Vol. 79, No. 1-3, pp. 157-64.  
Journal code: 8607908. ISSN: 0168-3659.  
PUB. COUNTRY: Netherlands  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200205  
ENTRY DATE: Entered STN: 8 Mar 2002  
Last Updated on STN: 17 May 2002  
Entered Medline: 16 May 2002

ABSTRACT:  
The objective of the present study was to obtain programmed drug delivery from hard gelatin capsules containing a hydrophilic plug (HPMC or guar gum). The significance of factors such as type of plug (powder or tablet), plug thickness and the formulation of fill material on the release pattern of diltiazem HCl, a model drug, was investigated. The body portion of the hard gelatin capsules was cross-linked by the combined effect of formaldehyde and heat treatment. A linear relationship was observed between weight of HPMC K15M and log % drug released at 4 h from the capsules containing the plug in powder form. In order to accelerate the drug release after a lag time of 4 h, addition of an effervescent blend, NaHCO<sub>3</sub> and citric acid, in the capsules was found to be essential. The plugs of HPMC in tablet form, with or without a water soluble adjuvant (NaCl or lactose) were used for obtaining immediate drug release after the lag time. \*\*\*Sodium\*\*\* chloride did not cause significant influence on drug release whereas lactose favourably affected the drug release. The \*\*\*capsules\*\*\* containing HPMC K15M tablet plug (200 mg) and 35 mg effervescent blend in body portion of the capsule met the selection criteria of less than 10% drug release in 4 h and immediate drug release thereafter. It is further shown that the drug release was also dependant on the type of swellable hydrophilic agent (HPMC or guar gum) and molecular weight of HPMC (K15M or 20 cPs). The results reveal that programmed drug delivery can be obtained from hard gelatin capsules by systemic formulation approach.

CONTROLLED TERM: *Capsules: CH, chemistry*  
*\*Capsules: PK, pharmacokinetics*  
Chemistry, Pharmaceutical

Delayed-Action Preparations: CH, chemistry  
Delayed-Action Preparations: PK, pharmacokinetics  
Diltiazem: CH, chemistry  
Diltiazem: PK, pharmacokinetics  
Drug Delivery Systems: MT, methods  
Galactans: CH, chemistry  
Galactans: PK, pharmacokinetics  
\*Lactose: AA, analogs & derivatives  
Lactose: CH, chemistry  
Lactose: PK, pharmacokinetics  
Mannans: CH, chemistry  
Mannans: PK, pharmacokinetics  
\*Methylcellulose: AA, analogs & derivatives  
Methylcellulose: CH, chemistry  
Methylcellulose: PK, pharmacokinetics  
Oxazines  
Plant Gums  
Powders: CH, chemistry  
Powders: PK, pharmacokinetics  
Tablets: CH, chemistry  
\*Tablets: PK, pharmacokinetics  
CAS REGISTRY NO.: 42399-41-7 (Diltiazem); 63-42-3 (Lactose); 9000-30-0 (guar gum); 9004-67-5 (Methylcellulose); 99705-65-4 (MK 458)  
CHEMICAL NAME: 0 (Capsules); 0 (Delayed-Action Preparations); 0 (Galactans); 0 (Mannans); 0 (Oxazines); 0 (Plant Gums); 0 (Powders); 0 (Tablets)

L117 ANSWER 37 OF 62 MEDLINE on STN  
ACCESSION NUMBER: 2001663774 MEDLINE Full-text  
DOCUMENT NUMBER: PubMed ID: 11709249  
TITLE: Phacoemulsification of brunescent and black cataracts.  
AUTHOR: Singh R; Vasavada A R; Janaswamy G  
CORPORATE SOURCE: Iladevi Cataract & IOL Research Centre, Ahmedabad, India.  
SOURCE: Journal of cataract and refractive surgery, (2001 Nov) Vol. 27, No. 11, pp. 1762-9.  
Journal code: 8604171. ISSN: 0886-3350.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: (COMPARATIVE STUDY)  
(EVALUATION STUDIES)  
Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200112  
ENTRY DATE: Entered STN: 19 Nov 2001  
Last Updated on STN: 23 Jan 2002  
Entered Medline: 11 Dec 2001

ABSTRACT:  
PURPOSE: To evaluate the efficacy and safety of a step-by-step, chop in situ, lateral separation technique to remove brunescent and black cataracts.  
SETTING: Iladevi Cataract and IOL Research Center, Ahmedabad, India. METHODS: In this prospective study conducted between May 1997 and June 1998, 167 consecutive eyes were divided into 2 groups: Group 1, brunescent cataract (n = 123), and Group 2, black cataract (n = 44). Preoperative assessment included axial length (AL), slitlamp examination, corneal pachymetry, tonometry, and specular microscopy. During phacoemulsification performed by a single surgeon, a step-by-step, chop in situ, lateral separation technique was used to divide the nucleus. Intraoperatively, hydroxypropyl methylcellulose 2% was used and irrigation was by balanced salt solution (BSS). Postoperatively, all eyes were assessed at 1, 7, 30, 90, 180, and 360 days.

The results were evaluated using regression analysis, the chi-square test, and the Student t test. RESULTS: The mean follow-up was 14.4 months (range 6 to 35 months) in Group 1 and 13.0 months (range 6 to 32 months) in Group 2. The AL was significantly greater in Group 2 ( $P = .02$ ). **Corticapsular** adhesions were present in 17.82% in Group 1 and 31.82% in Group 2. The mean cumulative dissipated energy was 2.03 and 3.12, respectively ( $P = .0005$ ). Wound site thermal injury occurred in 16 eyes (13.01%) in Group 1 and 4 eyes (9.09%) in Group 2. No serious intraoperative or postoperative complications were noted. One day postoperatively, the mean rise in intraocular pressure was 1.76 mm Hg in Group 1 and 4.15 mm Hg in Group 2 ( $P = .012$ ), and transient corneal edema was present in 24.40% and 34.10%, respectively. At 1 month, the endothelial cell loss was 10.06% in Group 1 and 9.22% in Group 2. CONCLUSION: The step-by-step, chop in situ, lateral separation technique was effective and did not produce serious complications such as zonulysis or posterior \*\*\*capsule\*\*\* rupture. However, the incidence of wound site thermal injury and endothelial cell loss was greater than after emulsification of standard cataracts.

CONTROLLED TERM: Check Tags: Female; Male  
Acetates: TU, therapeutic use  
Adult  
Aged  
Aged, 80 and over  
Cataract: CO, complications  
\*Cataract: TH, therapy  
Drug Combinations  
Follow-Up Studies  
Humans  
Intraocular Pressure  
\*Methylcellulose: AA, analogs & derivatives  
Methylcellulose: TU, therapeutic use  
Middle Aged  
Minerals: TU, therapeutic use  
\*Phacoemulsification: MT, methods  
Prospective Studies  
Safety  
Sodium Chloride: TU, therapeutic use  
Tonometry, Ocular  
CAS REGISTRY NO.: 7647-14-5 (Sodium Chloride); 8063-82-9  
(hypromellose); 9004-67-5 (Methylcellulose)  
CHEMICAL NAME: 0 (Acetates); 0 (BSS solution); 0 (Drug Combinations); 0 (Minerals)

L117 ANSWER 38 OF 62 MEDLINE on STN  
ACCESSION NUMBER: 2000492368 MEDLINE Full-text  
DOCUMENT NUMBER: PubMed ID: 10872778  
TITLE: Controlled release of swine semen **encapsulated** in calcium alginate beads.  
AUTHOR: Torre M L; Maggi L; Vigo D; Galli A; Bornaghi V; Maffeo G; Conte U  
CORPORATE SOURCE: Dipartimento Chimica Farmaceutica, Pavia, Italy.  
SOURCE: Biomaterials, (2000 Jul) Vol. 21, No. 14, pp. 1493-8.  
Journal code: 8100316. ISSN: 0142-9612.  
PUB. COUNTRY: ENGLAND: United Kingdom  
DOCUMENT TYPE: (COMPARATIVE STUDY)  
Journal; Article; (JOURNAL ARTICLE)  
(RESEARCH SUPPORT, NON-U.S. GOV'T)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200010  
ENTRY DATE: Entered STN: 27 Oct 2000

Last Updated on STN: 27 Oct 2000  
Entered Medline: 19 Oct 2000

ABSTRACT:

A quick and successful **encapsulation** method of swine spermatozoa is described: **hydroxypropylmethylcellulose** and **calcium**

\*\*\*chloride\*\*\* were added to the sampled ejaculate swine sperm (sperm-rich fraction: creamy white) and then this suspension was dropped into an \*\*\*aqueous\*\*\* **solution** of sodium alginate. In order to obtain different **capsule** thicknesses, different **calcium**

\*\*\*chloride\*\*\* concentrations were used. The influence of different formulations on in vitro spermatozoa release behavior and on the mechanical properties has been studied. In vitro sperm kinetics (motility and average velocity) have been determined. The results obtained from motility and average velocity tests of treated seminal material are promising, especially if the difficulty of preservation of swine spermatozoa compared to bovine sperm is considered. The different membranes obtained from the different calcium concentrations have had an influence on mechanical properties and on the release profile of spermatozoa from the **capsules**, and therefore, it is possible to modulate the release rate of the cells.

CONTROLLED TERM: Check Tags: Male

\*Alginates

Animals

Biocompatible Materials: CH, chemistry

\*Capsules

Capsules: CH, chemistry

Cattle

Delayed-Action Preparations

Glucuronic Acid

Hexuronic Acids

Microscopy, Electron, Scanning

\*Semen: PH, physiology

Sperm Motility

\*Spermatozoa: PH, physiology

Swine

CAS REGISTRY NO.: 576-37-4 (Glucuronic Acid); 9005-32-7 (alginic acid)

CHEMICAL NAME: 0 (Alginates); 0 (Biocompatible Materials); 0 (Capsules); 0 (Delayed-Action Preparations); 0 (Hexuronic Acids)

L117 ANSWER 39 OF 62 MEDLINE on STN

ACCESSION NUMBER: 1998090794 MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 9429096

TITLE: New **capsule** with tailored properties for the **encapsulation** of living cells.

AUTHOR: Lacik I; Brissova M; Anilkumar A V; Powers A C; Wang T

CORPORATE SOURCE: Center for Microgravity Research and Applications,  
Vanderbilt University, Nashville, Tennessee 37235, USA.

SOURCE: Journal of biomedical materials research, (1998 Jan) Vol. 39, No. 1, pp. 52-60.

Journal code: 0112726. ISSN: 0021-9304.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199802

ENTRY DATE: Entered STN: 26 Feb 1998

Last Updated on STN: 26 Feb 1998

Entered Medline: 17 Feb 1998

ABSTRACT:

A new **capsule** for the **encapsulation** and transplantation of pancreatic islets has been developed. Five active ingredients are involved in the **capsule** formation process: high viscosity sodium alginate (SA-HV), **cellulose** sulfate (CS), poly(methylene-co-guanidine) hydrochloride (PMCG), **calcium chloride**, and **sodium**

\*\*\*chloride.\*\*\* Complexation reaction exhibits several unique features: (1) \*\*\*solution\*\*\* of SA-HV with CS represents a physical mixture of two entangled polyanions that provide both pH-sensitive (carboxylic) and permanently charged (sulfate) groups; (2) presence of CaCl<sub>2</sub> in the cation \*\*\*solution\*\*\* ensures formation of the gelled bead after the drop of polyanion **solution** is immersed in the cation **solution**; (3) character of the polycation (PMCG), i.e., low molecular weight and unusually high charge density, combines both high mobility and reactivity; (4) presence of PMCG in cation **solution**, together with CaCl<sub>2</sub>, gives rise to the competitive binding of these two cations based on their diffusion and affinity towards the anion groups; and (5) NaCl provides the anti-gelling sodium ions that significantly affect the reaction of CaCl<sub>2</sub> with the polyanion matrix, thus altering the final properties of the **capsule** surface, shape, and permeability. The **capsule** size, mechanical strength, membrane thickness, and permeability can be precisely adjusted and quantified. Detailed information on the permeability aspects is given in another paper by Brissova et al. [J. Biomed. Mater. Sci., 39, 61 (1998)]. The new features concerning \*\*\*capsule\*\*\* processing and testing are presented. We believe that the \*\*\*capsule\*\*\* characteristics can be optimized in the next step to meet the biological criteria. The initial transplantation results suggest that this \*\*\*capsule\*\*\* is biocompatible and noncytotoxic and is a promising candidate for the immunoisolation of cells such as pancreatic islets.

CONTROLLED TERM: Animals

\*Biocompatible Materials  
    **Capsules**

\*Islets of Langerhans Transplantation

\*Polymers

Rats

Rats, Sprague-Dawley

CHEMICAL NAME: 0 (Biocompatible Materials); 0 (**Capsules**); 0 (Polymers)

L117 ANSWER 40 OF 62      MEDLINE on STN

ACCESSION NUMBER: 84035671      MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 6631689

TITLE: Effect of dosage form and formulation factors on the adherence of drugs to the esophagus.

AUTHOR: Marvola M; Rajaniemi M; Marttila E; Vahervuo K; Sothmann A

SOURCE: Journal of pharmaceutical sciences, (1983 Sep) Vol. 72, No. 9, pp. 1034-6.

Journal code: 2985195R. ISSN: 0022-3549.

PUB. COUNTRY: United States

DOCUMENT TYPE: (IN VITRO)

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 198312

ENTRY DATE: Entered STN: 19 Mar 1990

Last Updated on STN: 19 Mar 1990

Entered Medline: 17 Dec 1983

ABSTRACT:

In recent years, many case reports concerning esophageal injuries caused by drugs have been published. The primary cause has apparently been the adherence of the drug product to the esophagus. In the present study, the adherent tendency of a number of types of tablets and **capsules** were tested in

vitro using a recently developed isolated porcine esophagus preparation. The results showed that the tendency of products to adhere to the esophageal mucosa can be modified to a great extent by shape and formulation. Products with low adherence can be obtained by film coating with **aqueous** dispersions or by sugarcoating. In contrast, gelatin **capsules** and some \*\*\*cellulose\*\*\* films appear to have a high tendency to adhere to the esophagus.

CONTROLLED TERM: Check Tags: Female; Male  
Adhesiveness  
Animals  
\*Capsules  
Capsules: AE, adverse effects  
Chemistry, Pharmaceutical  
\*Esophagus  
Esophagus: IN, injuries  
Potassium Chloride: AD, administration & dosage  
Swine  
\*Tablets  
Tablets: AE, adverse effects  
CAS REGISTRY NO.: 7447-40-7 (Potassium Chloride)  
CHEMICAL NAME: 0 (**Capsules**); 0 (Tablets)

L117 ANSWER 41 OF 62 MEDLINE on STN  
ACCESSION NUMBER: 79199605 MEDLINE Full-text  
DOCUMENT NUMBER: PubMed ID: 450035  
TITLE: Biochemical and serological characteristics of soluble yeast phase antigens of *Histoplasma capsulatum*.  
AUTHOR: Malcolm G B; Pine L; Cherniak R; Moss C W  
SOURCE: *Mycopathologia*, (1979 Mar 30) Vol. 67, No. 1, pp. 3-16.  
Journal code: 7505689. ISSN: 0301-486X.  
PUB. COUNTRY: Netherlands  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 197908  
ENTRY DATE: Entered STN: 15 Mar 1990  
Last Updated on STN: 15 Mar 1990  
Entered Medline: 29 Aug 1979

ABSTRACT:  
Soluble antigens of whole yeast-phase cells were **extracted** with a 0.1 M phosphate buffer containing 0.1 M **sodium chloride** and 0.02% iodacetate. After being separated by differential filtration into fractions less than or greater than 50,000 daltons these antigens were purified by molecular sieve and chromatographic separations on ionic exchange resins. Two high molecular weight fractions obtained from diethylaminoethyl- \*\*\*cellulose\*\*\* (DEAE) at pH 8.0 and 7.0 with tris (hydroxymethyl) aminomethane (Tris) buffer were M antigens; those obtained at pH 4.0 and 4.0 with **salt** were H antigens. The four fractions had protein to carbohydrate ratios of 7.3, 14.0, 8.4, and 6.5 respectively, and all had essentially the same amino acid composition with no methionine and tyrosine and little histidine, arginine, phenylalanine and lysine. They had high concentrations of glucose, less mannose and traces of galactose. The low molecular weight fractions had the new complex "Y antigen", M antigen with protein to carbohydrate ratios of 1.4, 1.4 and 0.3 respectively. The amino acid and sugar composition of Y antigen strongly resembled the composition of the low molecular weight H and M antigens. Unlike the high molecular weight antigens, these low molecular weight antigens had methionine in relatively high concentrations; they had the same sugars as their respective high molecular weight counterparts. The yeast phase antigens differed from their respective mycelial counterparts in the following ways: glucose was the major sugar in the

yeast phase with less amounts of mannose and traces of galactose, whereas in the mycelial antigens, mannose was the major sugar, with lesser amounts of galactose, and hexosamine. The H and M antigens of the yeast phase had high concentrations of glycine and alanine, whereas in the mycelial phase, these antigens had high concentrations of threonine and proline; the H and M antigens of the yeast phase had 5 to 16 times the protein to carbohydrate ratio observed for the same antigens of histoplasmin.

CONTROLLED TERM: Amino Acids: AN, analysis

\*Antigens, Fungal

Antigens, Fungal: AN, analysis

Antigens, Fungal: IM, immunology

Carbohydrates: AN, analysis

Fungal Proteins: AN, analysis

Histoplasma: CY, cytology

\*Histoplasma: IM, immunology

Molecular Weight

Precipitin Tests

CHEMICAL NAME: 0 (Amino Acids); 0 (Antigens, Fungal); 0 (Carbohydrates); 0 (Fungal Proteins)

L117 ANSWER 42 OF 62 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN DUPLICATE 1

ACCESSION NUMBER: 2005249315 EMBASE Full-text

TITLE: Controlled release of dexamethasone from **microcapsules** produced by polyelectrolyte layer-by-layer nanoassembly.

AUTHOR: Pargaonkar N.; Lvov Y.M.; Li N.; Steenekamp J.H.; De Villiers M.M.

CORPORATE SOURCE: M.M. De Villiers, Department of Basic Pharmaceutical Sciences, School of Pharmacy, University of Louisiana at Monroe, Monroe, LA, United States. devilliers@ulm.edu

SOURCE: Pharmaceutical Research, (2005) Vol. 22, No. 5, pp. 826-835. .

Refs: 29

ISSN: 0724-8741 CODEN: PHREEB

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 037 Drug Literature Index  
039 Pharmacy

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 23 Jun 2005

Last Updated on STN: 23 Jun 2005

ABSTRACT: Purpose. In an effort to expand the application of core-shell structures fabricated by electrostatic layer-by-layer (LbL) self-assembling for drug delivery, this study reports the controlled release of dexamethasone from microcrystals **encapsulated** with a polyelectrolyte shell. Methods.

The LbL self-assembly process was used to produce dexamethasone particles \*\*\*encapsulated\*\*\* with up to five double layers formed by alternating the adsorption of positively charged poly(dimethyldiallyl ammonium chloride), negatively charged sodium poly(styrenesulfonate) and depending on the pH positively or negatively charged gelatin A or B onto the surface of the negatively charged dexamethasone particles. The nano-thin shells were characterized by quartz crystal microbalance measurements, microelectrophoresis, microcalorimetry, confocal microscopy, and scanning electron microscopy. In vitro release of dexamethasone from the \*\*\*microcapsules\*\*\* suspended in water or **carboxymethylcellulose** gels were measured using vertical Franz-type diffusion cells. Results. Sonication of a suspension of negatively charged dexamethasone microcrystals in a solution of PDDA not only reduced aggregation but also reduced the size of

the sub-micrometer particles. Assembly of multiple polyelectrolyte layers around these monodispersed cores produced a polyelectrolyte multilayer shell around the drug microcrystals that allowed for controlled release depending on the composition and the number of layers. Conclusions. Direct surface modification of dexamethasone microcrystals via the LbL process produced monodispersed suspensions with diffusion-controlled sustained drug release via the polyelectrolyte multilayer shell. .COPYRGT. 2005 Springer Science+Business Media, Inc.

CONTROLLED TERM: Medical Descriptors:  
\*controlled drug release  
\***microcapsule**  
drug delivery system  
crystal  
**encapsulation**  
electricity  
adsorption  
pH measurement  
nanoparticle  
microelectrophoresis  
microcalorimetry  
confocal microscopy  
scanning electron microscopy  
suspension  
diffusion  
gel  
ultrasound  
dispersion  
article  
priority journal  
Drug Descriptors:  
\*polyelectrolyte: PR, pharmaceutics  
\*dexamethasone: PR, pharmaceutics  
**poly(diallyldimethylammonium chloride): PR, pharmaceutics**  
polystyrenesulfonate sodium: PR, pharmaceutics  
gelatin a: PR, pharmaceutics  
gelatin b: PR, pharmaceutics  
gelatin: PR, pharmaceutics  
silicon dioxide  
**water**  
**carboxymethylcellulose**  
unclassified drug

CAS REGISTRY NO.: (dexamethasone) 50-02-2; (poly(diallyldimethylammonium chloride)) 26062-79-3; (polystyrenesulfonate sodium) 37349-16-9, 39291-70-8, 62744-35-8, 9080-79-9; (gelatin) 9000-70-8; (silicon dioxide) 10279-57-9, 14464-46-1, 14808-60-7, 15468-32-3, 60676-86-0, 7631-86-9; (water) 7732-18-5; (**carboxymethylcellulose**) 8050-38-2, 9000-11-7, 9004-32-4, 9050-04-8

COMPANY NAME: Spectrum (United States); Sigma Aldrich (United States)

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ACCESSION NUMBER: 1998395443 EMBASE Full-text

TITLE: Preparation and characterization of enteric microspheres containing bovine insulin by a w/o/w emulsion solvent evaporation method.

AUTHOR: Nagareya N.Y.; Uchida T.; Matsuyama K.

CORPORATE SOURCE: T. Uchida, Faculty of Pharmaceutical Sciences, Mukogawa

SOURCE: Women's University, 11-68, Koshien 9-Bancho, Nishinomiya City 663-8179, Japan  
Chemical and Pharmaceutical Bulletin, (1998) Vol. 46, No. 10, pp. 1613-1617. .  
Refs: 15  
ISSN: 0009-2363 CODEN: CPBTAL

COUNTRY: Japan  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 003 Endocrinology  
030 Pharmacology  
037 Drug Literature Index  
039 Pharmacy

LANGUAGE: English  
SUMMARY LANGUAGE: English  
ENTRY DATE: Entered STN: 10 Jan 1999  
Last Updated on STN: 10 Jan 1999

ABSTRACT: The objective of this study was to produce enteric microspheres containing bovine insulin as a model drug using a **water-in-oil-in-\*\*\*water\*\*\*** (w/o/w) emulsion solvent evaporation method, and the preparative conditions were optimized. When **hydroxypropylmethylcellulose acetate succinate** (AS-HG type; high content of succinyl group) was employed as an enteric wall material, optimized microspheres showed almost 90% of the loading efficiency of insulin and 30.8  $\mu\text{m}$  of mean volume diameter. The mixture of methylene **chloride** and acetone (4:1) as an oleaginous phase, 400  $\mu\text{l}$  of bovine insulin solution (dissolved in 30% of acetic acid) as an internal **aqueous** phase, and 1.0% of polyvinylalcohol dissolved in pH 3.0 citrate buffer as an external **aqueous** phase, were employed in the experiment. In relation to other enteric **cellulose** derivatives (AS-MG type, AS-LG type; medium and low content of succinyl group, respectively), the **microencapsulation** using a simultaneous preparation method also resulted in quite high loading efficiencies, whereas the choice of poly(methyl methacrylate) as a wall material caused aggregation or flocculation in the preparative process of every batch. The AS-HG microspheres showed very fast release profile in pH 6.8 buffer, but no released fraction was observed in pH 1.2 buffer. This phenomenon suggested enteric characteristics of prepared microspheres. Finally AS-HG microspheres containing 4% lauric acid and 9% insulin were prepared, suspended in 0.1% of carboxymethyl **cellulose** solution, and administered to the rat rectum (corresponding to 50 I.U./kg insulin). The plasma glucose level reached minimum level at 0.5 h after administration then gradually rose to normal.

CONTROLLED TERM: Medical Descriptors:  
\*drug formulation  
emulsion  
**microencapsulation**  
insulin release  
glucose blood level  
nonhuman  
male  
rat  
animal experiment  
rectal drug administration  
article  
Drug Descriptors:  
\*bovine insulin: PR, pharmaceutics  
\*microsphere: PR, pharmaceutics  
**\*hydroxypropylmethylcellulose acetate succinate: PR, pharmaceutics**  
lauric acid: PR, pharmaceutics  
dichloromethane

acetone  
polyvinyl alcohol  
glucose: EC, endogenous compound  
**carboxymethylcellulose**  
CAS REGISTRY NO.: (bovine insulin) 11070-73-8; (hydroxypropylmethylcellulose acetate succinate) 71138-97-1; (lauric acid) 115-05-9, 143-07-7; (dichloromethane) 75-09-2; (acetone) 67-64-1; (polyvinyl alcohol) 37380-95-3, 9002-89-5; (glucose) 50-99-7, 84778-64-3; (**carboxymethylcellulose**) 8050-38-2, 9000-11-7, 9004-32-4, 9050-04-8  
COMPANY NAME: Shinetsu (Japan); Aldrich (United States); Sigma (United States); Nakarai

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DUPLICATE 6

ACCESSION NUMBER: 96325925 EMBASE Full-text

DOCUMENT NUMBER: 1996325925

TITLE: Stable formulations of recombinant human growth hormone and interferon- $\gamma$  for **microencapsulation** in biodegradable microspheres.

AUTHOR: Cleland J.L.; Jones A.J.S.

CORPORATE SOURCE: Dept. Pharmaceutical Res./Develop., Genentech Inc, South San Francisco, CA 94080, United States

SOURCE: Pharmaceutical Research, (1996) Vol. 13, No. 10, pp. 1464-1475.

ISSN: 0724-8741 CODEN: PHREEB

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 19 Nov 1996

Last Updated on STN: 19 Nov 1996

ABSTRACT: Purpose. The successful development of controlled release formulations for proteins requires that the protein not be denatured during the manufacturing process. The major objective was to develop formulations that stabilize two recombinant human proteins, human growth hormone (rhGH) and interferon- $\gamma$  (rhIFN- $\gamma$ ), at high protein concentrations (>100 mg/mL) in organic solvents commonly used for **microencapsulation**, methylene \*\*\*chloride\*\*\* and ethyl acetate. Methods. Several excipients were screened to obtain the maximum solubility of each protein. These formulations ( \*\*\*aqueous\*\*\*, lyophilized, milled, spray dried, or isoelectric precipitate) were then rapidly screened by emulsification in the organic solvent followed by recovery into excess buffer. Additional screening was performed with solid protein that was suspended in the organic solvent and then recovered with excess buffer. The recovery of native protein was determined by native size exclusion chromatography (SEC-HPLC) and circular dichroism (CD). The selected formulations were **encapsulated** in polylactic-coglycolic acid (PLGA) microspheres by either **water-in-oil-in-water** (W/O/W) or solid-in-oil-in-water (S/O/W) methods. The initial protein released from the microspheres incubated at physiological conditions was analyzed by SEC-HPLC, CD, and biological assays. Results, The stability of a given formulation in the rapid screening method correlated well with stability during \*\*\*encapsulation\*\*\* in PLGA microspheres. Formulations of rhGH containing Tween 20 or 80 resulted in lower recovery of native protein, while trehalose and mannitol formulations (phosphate buffer, pH 8.0) yielded complete recovery of native rhGH. Other additives such as **carboxymethyl cellulose**, gelatin, and dextran 70 were not effective stabilizers, and polyethylene glycol provided some stabilization of rhGH. Trehalose/rhGH (1:4 mass ratio) and

mannitol/rhGH (1:2 mass ratio) formulations (potassium phosphate buffer, pH 8.0) were lyophilized, reconstituted to 200 and 400 mg/mL rhGH, respectively, and then **encapsulated** in PLGA microspheres. The protein was released from these microspheres in its native state. Lyophilized formulations of rhGH yielded analogous results indicating the ability of trehalose and mannitol to stabilize the protein. Small solid particles of rhGH generated by spray drying (both air and freeze-drying) formulations containing Tween 20 or PEG were stable in ethyl acetate, but not methylene **chloride**. Similar results were also obtained with rhIFN- $\gamma$  (137 mg/mL in succinate buffer, pH 5.0), where both mannitol and trehalose were observed to stabilize the protein during exposure to the organic solvents resulting in the release of native rhIFN- $\gamma$  from PLGA microspheres. Conclusions. The rapid screening method allowed the development of stable concentrated protein solutions or solid protein formulations that could be successfully **encapsulated** in PLGA microspheres. The excipients observed to stabilize these proteins function by preferential hydration of the protein, and in the dry state (e.g., trehalose) may stabilize the protein via **water** substitution yielding a protective coating around the protein surface. Studies of other proteins should provide further insight into this mechanism of protein stabilization during **encapsulation**.

CONTROLLED TERM: Medical Descriptors:

- \*drug formulation
- \*drug stability
- \***microencapsulation**
- article
- circular dichroism
- conformation
- freeze drying
- gel permeation chromatography
- priority journal
- sustained release preparation

Drug Descriptors:

- microsphere
- \*gamma interferon: PR, pharmaceutics
- \*human growth hormone: PR, pharmaceutics
- organic solvent

CAS REGISTRY NO.: (gamma interferon) 82115-62-6; (human growth hormone) 12629-01-5

COMPANY NAME: Genentech

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ACCESSION NUMBER: 95346215 EMBASE Full-text

DOCUMENT NUMBER: 1995346215

TITLE: Production of **water**-containing polymer **microcapsules** by the complex emulsion/solvent evaporation technique. Effect of process variables on the **microcapsule** size distribution.

AUTHOR: Kentepozidou A.; Kiparissides C.

CORPORATE SOURCE: Department of Chemical Engineering, Chemical Proc Engineering Res Inst, Aristotle University of Thessaloniki, PO Box 472, Thessaloniki, Greece

SOURCE: Journal of Microencapsulation, (1995) Vol. 12, No. 6, pp. 627-638.

ISSN: 0265-2048 CODEN: JOMIEF

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation

030 Pharmacology

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 5 Dec 1995

Last Updated on STN: 5 Dec 1995

ABSTRACT: The complex emulsion/solvent evaporation technique was employed for the production of **water**-containing polymer **microcapsules**.

The inner phase of the **microcapsules** consisted of an **aqueous** solution of gelatin. Several polymers (e.g. poly(styrene), poly(methyl methacrylate), ethyl **cellulose**, poly(vinyl **chloride**) were utilized as wall-forming materials and the effect of the polymer type on the size and the surface characteristics of the **microcapsules** was experimentally investigated. The size of the **microcapsules** was strongly affected by the conditions applied during the formation of both simple (w/o) and complex (w/o)/w emulsions. Poly(styrene) **microcapsules** with a mean Sauter diameter in the range of 4-12 $\mu$ m were prepared by varying the rate of agitation (1500-4000 rpm) and the concentration of stabilizer (potassium oleate, 0.1-1.5%w/v) used in the formation of the (w/o)/w emulsion. High stabilizer concentrations and agitation rates resulted in a significant reduction of the mean size of the complex droplets and in a simultaneous increase of the breadth of the **capsule** size distribution.

CONTROLLED TERM: Medical Descriptors:

\***microencapsulation**

article

controlled study

molecular weight

particle size

emulsion

Drug Descriptors:

\***microcapsule**

**ethyl cellulose**

gelatin

polymer

polystyrene

**polyvinylchloride**

CAS REGISTRY NO.: (ethyl **cellulose**) 9004-57-3; (gelatin) 9000-70-8;  
(polystyrene) 9003-53-6; (**polyvinylchloride**) 9002-86-2

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ACCESSION NUMBER: 95065295 EMBASE Full-text

DOCUMENT NUMBER: 1995065295

TITLE:

The analysis of drug release from diluted **water** /oil/**water** emulsions by a model of the rupture of oil membrane.

AUTHOR: Hino T.; Takeuchi H.; Niwa T.; Kitagawa M.; Kawashima Y.

CORPORATE SOURCE: Gifu Pharmaceutical University, 5-6-1 Mitahora-Higashi, Gifu 502, Japan

SOURCE: Journal of Pharmacy and Pharmacology, (1995) Vol. 47, No. 1, pp. 1-7.

ISSN: 0022-3573 CODEN: JPPMAB

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 030 Pharmacology

037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 14 Mar 1995

Last Updated on STN: 14 Mar 1995

ABSTRACT: The release behaviour of theophylline **encapsulated** in the inner **aqueous** phase of a **water/oil/water** emulsion was investigated by two methods. A **cellulose** tube containing a sample of the emulsion was placed in a rotary basket and was stirred in a dissolution medium (Method A), or the w/o/w emulsion was dispersed in a dissolution medium and the system was stirred by a paddle, allowing the drug to permeate into a **cellulose** tube placed in the dispersing medium (Method B). In Method A, the drug release rate from the emulsion decreased with increase in the concentration of **sodium chloride** co-formulated with the drug in the inner **aqueous** phase. The drug release rate in the dissolution test medium Number 1 or Number 2 of the JP XII was greater than that in purified **water** and was increased with the ionic strength of the dissolution medium. The drug was released more rapidly in Method B than in Method A, because the emulsion was destroyed more easily using the former method. As this destruction of emulsion structure occurred immediately after dilution with dissolution medium, the influence of the dissolution medium on the release profile could not be detected using Method B. The experimental data of drug release were satisfactorily explained by the destruction model of the oil membranes of the **water/oil/water** emulsions.

CONTROLLED TERM: Medical Descriptors:  
\*drug release  
article  
controlled study  
dilution  
dissolution  
drug formulation  
    **encapsulation**  
experimental model  
ionic strength  
methodology  
emulsion  
Drug Descriptors:  
\*theophylline: DV, drug development  
\*theophylline: PR, pharmaceutics  
    \***water oil cream**  
    **cellulose**  
    **sodium chloride**  
    **water**

CAS REGISTRY NO.: (theophylline) 58-55-9, 5967-84-0, 8055-07-0, 8061-56-1, 99007-19-9; (**cellulose**) 61991-22-8, 68073-05-2, 9004-34-6; (**sodium chloride**) 7647-14-5; (**water**) 7732-18-5

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ACCESSION NUMBER: 94263224 EMBASE Full-text  
DOCUMENT NUMBER: 1994263224  
TITLE: Preparation and characterisation of poly(lactic acid) hemoglobin microspheres.  
AUTHOR: Cedrati N.; Maincent P.; Thomas F.; Labrude P.; Vigneron C.  
CORPORATE SOURCE: Fac Sciences Pharmaceutiques Biol, BP 403, 54001 Nancy Cedex, France  
SOURCE: Artificial Cells, Blood Substitutes, and Immobilization Biotechnology, (1994) Vol. 22, No. 3, pp. 867-873. .  
ISSN: 1073-1199 CODEN: ABSBE4  
COUNTRY: United States  
DOCUMENT TYPE: Journal; Conference Article  
FILE SEGMENT: 025 Hematology

027 Biophysics, Bioengineering and Medical  
Instrumentation

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 7 Sep 1994

Last Updated on STN: 7 Sep 1994

ABSTRACT: For many years, a lot of research effort has been carried out with a view to preparing blood substitutes. Our group has developed a process of \*\*\*encapsulation\*\*\* of hemoglobin in polylactid microspheres. An \*\*\*aqueous\*\*\* solution of hemoglobin was emulsified into a solution of polymer in methylene **chloride** to form a W/O emulsion. This primary emulsion was then added to a external **aqueous** phase under stirring until the evaporation of methylene **chloride**. The microspheres were separated by filtration and washed with distilled **water**.

Microspheres were spherical and their sizes vary between 10 and 500  $\mu\text{m}$ . More than 80% of the hemoglobin was **encapsulated**. From the absorption spectra of hemoglobin from microspheres, we did not notice any alteration of the oxygen carrier. The dissociation curve of the hemoglobin demonstrated the permeability of the polymeric wall of these microspheres to oxygen. This curve was relatively sigmoidal and presented a P50 similar to that of free hemoglobin in the same experimental conditions. A \*\*\*cellulose\*\*\* 's acetate gel electrophoresis of hemoglobin extracted from the microspheres showed one band that correlates with intact hemoglobin. These results suggest that hemoglobin does not interact chemically with the polymer matrix and that the process of **microencapsulation** does not alter the hemoglobin molecule.

CONTROLLED TERM: Medical Descriptors:  
absorption spectroscopy  
**aqueous solution**  
chemical reaction  
conference paper  
controlled study  
evaporation  
filtration  
gel electrophoresis  
human  
**microencapsulation**  
oxygen dissociation curve  
permeability  
emulsion  
Drug Descriptors:  
\*microsphere  
\*hemoglobin  
\*polylactic acid  
blood substitute  
dichloromethane

CAS REGISTRY NO.: (hemoglobin) 9008-02-0; (polylactic acid) 26100-51-6;  
(dichloromethane) 75-09-2

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ACCESSION NUMBER: 86138270 EMBASE Full-text

DOCUMENT NUMBER: 1986138270

TITLE: The formation and characterization of hydrocortisone-loaded poly(( $\pm$ )-lactide) microspheres.

AUTHOR: Cavalier M.; Benoit J.P.; Thies C.

CORPORATE SOURCE: Laboratoire de Pharmacie Galenique et Biopharmacie,  
Universite Paris-Sud, Chatenay-Malabry, France

SOURCE: Journal of Pharmacy and Pharmacology, (1986) Vol. 38, No.

4, pp. 249-253. .  
CODEN: JPPMAB  
COUNTRY: United Kingdom  
DOCUMENT TYPE: Journal  
FILE SEGMENT: 037 Drug Literature Index  
LANGUAGE: English  
ENTRY DATE: Entered STN: 10 Dec 1991  
Last Updated on STN: 10 Dec 1991

**ABSTRACT:** The solvent evaporation process has been used to form hydrocortisone-loaded microspheres from poly(( $\pm$ )-lactide) (PLA) and a lactide-glycolide copolymer (65/35). Methylene **chloride** was the casting solvent. Partially hydrolysed (88%) poly(vinyl alcohol) and \*\*\*methylcellulose\*\*\* were used as **aqueous** phase emulsifiers. \*\*\*Methylcellulose\*\*\* was preferred, because it gave stable emulsions as the amount of hydrocortisone being **encapsulated** increased whereas poly(vinyl alcohol) did not. With **methylcellulose** as the emulsifier, a broad size range of spherical microspheres containing up to 50% (w/w) hydrocortisone could be prepared. Thermal and X-ray analyses established that poly(( $\pm$ )-lactide) microspheres containing hydrocortisone retained thermal events characteristic of both materials. This is evidence that such microspheres contain, to some extent, crystalline hydrocortisone domains dispersed in a PLA matrix. But most of the **encapsulated** drug was molecularly dispersed in the PLA glass. The stability of hydrocortisone in microspheres was evaluated in different storage conditions: no degradation of drug was found. The release of hydrocortisone from 250-350  $\mu$ m diameter microspheres into agitated 37° C **water** (nitrogen atmosphere) was determined by HPLC analysis. The microspheres evaluated had initial hydrocortisone payloads of 12 to 47% (w/w). The rate of drug release increased as the initial drug payload carried by the microspheres increased. The release data are not adequately described by zero order, first order, or square-root-of-time release kinetics. Drug release from microspheres that contain 12% (w/w) hydrocortisone approached a plateau value well below the amount of drug actually carried by the microspheres. This is particularly true for hydrocortisone **encapsulated** in lactide-glycolide polymer.

CONTROLLED TERM: Medical Descriptors:  
\*drug delivery system  
\*drug isolation  
\*drug synthesis  
\*evaporation  
priority journal  
methodology  
nonhuman  
nonbiological model  
Drug Descriptors:  
\*dichloromethane  
\*hydrocortisone  
\***methylcellulose**  
\*polyglactin  
\*polylactide  
\*polyvinyl alcohol  
vinol 205  
unclassified drug

CAS REGISTRY NO.: (dichloromethane) 75-09-2; (hydrocortisone) 50-23-7; (**methylcellulose**) 79484-92-7, 9004-67-5;  
(polyglactin) 26780-50-7, 34346-01-5; (polylactide) 26680-10-4; (polyvinyl alcohol) 37380-95-3, 9002-89-5

CHEMICAL NAME: Vinol 205  
COMPANY NAME: Southern research (United States); Baker chemical co (United States); Air products (United States); Sigma

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ACCESSION NUMBER: 2006191881 EMBASE Full-text  
TITLE: Effect of xingnao qizhi **capsule** on the expression of basic fibroblast growth factor mRNA of hippocampal tissue in mice with vascular dementia.  
AUTHOR: Wu C.-S.; Yang M.-X.; Yu W.-T.; Xu H.-Z.  
CORPORATE SOURCE: Prof. M.-X. Yang, College of Traditional Chinese Medicine, Hebei Medical University, Shijiazhuang 050091 Hebei Province, China  
SOURCE: Chinese Journal of Clinical Rehabilitation, (20 Feb 2006) Vol. 10, No. 7, pp. 19-21. .  
Refs: 5  
ISSN: 1671-5926 CODEN: ZLKHAH  
COUNTRY: China  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 008 Neurology and Neurosurgery  
030 Pharmacology  
037 Drug Literature Index  
039 Pharmacy

LANGUAGE: Chinese  
SUMMARY LANGUAGE: English; Chinese  
ENTRY DATE: Entered STN: 11 May 2006  
Last Updated on STN: 11 May 2006

ABSTRACT: Aim: To investigate the effects of xingnao qizhi **capsule** on learning and memory function, expression of basic fibroblast growth factor (bFGF) mRNA of hippocampal tissue and histopathological changes of brain tissue in mice with vascular dementia (VD). Methods: The experiment was completed at the western area of Hebei Medical University from December 2004 to October 2005. 1 Totally 120 male Kunming mice were randomly divided into 6 groups: sham-operation group, model group, high-dose xingnao qizhi group, low-dose xingnao qizhi group, ginkgo leaf group and nimodipine group with 20 in each group. 2 VD mice models were established with cerebral ischemia repeatedly ligated on bilateral common carotid artery. Grouping intervention was performed on the second day after operation. High and low dosage xingnao qizhi group: Mice in this group were perfused with 1.84 and 0.92 g/kg xingnao qizhi \*\*\*capsule\*\*\* (produced in Hebei Medical University, consisting of shichangpu, chuanxiong, juluo and gouqizi; 6.24 g raw drug per extract; 184 g/L and 92 g/L solution were mixed with 0.5% **carboxymethylcellulose** sodium during experiment); ginkgo leaf group: Mice in this group were perfused with 0.05 g/kg ginkgo leaf (50 mg ginkgo leaf extract per pill; Guangxi Banzhou Pharmacological Limited Company; batch number: 20040902; 2.5 g/L suspension was mixed with 0.5% **carboxymethylcellulose** sodium during experiment); nimodipine group: Mice in this group were perfused with 0.04 g/kg nimodipine (Shijiazhuang Hualong Pharmacological Limited Company; batch number: 20041017, 20 mg/pill); sham-operation group and model group: Mice in both groups were perfused with 10 mL/kg saline once a day for 7 days. 3 Results of learning and memory were assayed with electric water maze; pathomorphological changes in brain tissue were observed with haemalum-eosin staining; and expression of bFGF mRNA of hippocampal tissue in mice were detected with reverse transcription polymerase chain reaction. 4 Measurement data were compared with analysis of variance and LSD method. Results: Totally 49 mice died during modeling, and other 71 mice entered the final analysis. 1 Pathomorphology under light microscope: Ischemic pathological changes were observed in hippocampus of brain tissue of mice in model group, and lesion in each drug group was lighter than that in model group. 2 Results of learning and memory: Results of mice in model were lower than those in sham operation group ( $P < 0.01$ ); but those in each drug group were superior to those in model group ( $P < 0.05-0.01$ ). There

was not significant difference among drug groups ( $P > 0.05$ ). 3 Relative expression of bFGF mRNA in hippocampal tissue: That in model group was higher than that in sham-operation group ( $P < 0.05$ ); that in high-dosage and low-dosage, xingnao qizhi groups, ginkgo leaf group and nimodipine group was higher than that in model group ( $P < 0.01$ ); that in high-dosage xingnao qizhi group was higher than that in low-dosage xingnao qizhi group, ginkgo leaf group and nimodipine group ( $P < 0.05-0.01$ ); there were not significant differences among low-dosage xingnao qizhi group, ginkgo leaf group and nimodipine group ( $P > 0.05$ ). Conclusion: Xingnao qizhi **capsule** can improve learning and memory function of VD mice. The mechanisms are regulating the expression of bFGF mRNA of hippocampals tissue and relieving ischemia-reperfusion injury.

CONTROLLED TERM:

Medical Descriptors:

\*multiinfarct dementia: DT, drug therapy  
**drug capsule**.  
protein expression  
hippocampus  
brain tissue  
learning  
memory  
histopathology  
drug megadose  
low drug dose  
disease model  
brain ischemia  
carotid artery ligation  
drug infusion  
treatment outcome  
maze test  
reverse transcription polymerase chain reaction  
analysis of variance  
death  
microscopy  
reperfusion injury: CO, complication  
reperfusion injury: DT, drug therapy  
reperfusion injury: PC, prevention  
nonhuman  
mouse  
animal experiment  
animal model  
controlled study  
animal tissue  
article

CONTROLLED TERM:

Drug Descriptors:

\*Chinese drug: CM, drug comparison  
\*Chinese drug: DO, drug dose  
\*Chinese drug: DT, drug therapy  
\*Chinese drug: PR, pharmaceutics  
\*Chinese drug: PD, pharmacology  
\*xingnao qizhi: CM, drug comparison  
\*xingnao qizhi: DO, drug dose  
\*xingnao qizhi: DT, drug therapy  
\*xingnao qizhi: PR, pharmaceutics  
\*xingnao qizhi: PD, pharmacology  
\*basic fibroblast growth factor: EC, endogenous compound  
messenger RNA: EC, endogenous compound  
Ginkgo biloba extract: CM, drug comparison  
Ginkgo biloba extract: DO, drug dose  
Ginkgo biloba extract: DT, drug therapy  
Ginkgo biloba extract: PD, pharmacology

nimodipine: CM, drug comparison  
nimodipine: DO, drug dose  
nimodipine: DT, drug therapy  
nimodipine: PD, pharmacology  
**carboxymethylcellulose**  
**sodium chloride**  
**water**  
hematoxylin  
eosin  
unclassified drug  
CAS REGISTRY NO.: (basic fibroblast growth factor) 106096-93-9; (nimodipine) 66085-59-4; (**carboxymethylcellulose**) 8050-38-2, 9000-11-7, 9004-32-4, 9050-04-8; (**sodium chloride**) 7647-14-5; (**water**) 7732-18-5; (hematoxylin) 517-28-2; (eosin) 17372-87-1, 51395-88-1, 548-26-5  
COMPANY NAME: Guangxi Banzhou; Shijiazhuang Hualong

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ACCESSION NUMBER: 2002349506 EMBASE Full-text  
TITLE: Taste masking science and technology applied to compacted oral solid dosage forms - Part 2.  
AUTHOR: Reo J.P.; Frederickson J.K.  
SOURCE: American Pharmaceutical Review, (2002) Vol. 5, No. 3, pp. 8-23.  
Refs: 106  
ISSN: 1099-8012 CODEN: APHRFS  
COUNTRY: United States  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 037 Drug Literature Index  
039 Pharmacy  
LANGUAGE: English  
ENTRY DATE: Entered STN: 17 Oct 2002  
Last Updated on STN: 17 Oct 2002  
CONTROLLED TERM: Medical Descriptors:  
\*taste  
\*masking  
\*pharmaceutical care  
drug dosage form  
oral drug administration  
patent  
drug delivery system  
    **microencapsulation**  
coacervation  
phase separation  
drug release  
mass spectrometry  
atomic force microscopy  
drug coating  
drug solubility  
controlled study  
article  
Drug Descriptors:  
clarithromycin: PR, pharmaceutics  
ketoprofen  
indometacin: PR, pharmaceutics  
fluorouracil: PR, pharmaceutics  
phenacetin: PR, pharmaceutics  
eudragit

lactose  
sparfloxacin: PR, pharmaceutics  
ibuprofen: PR, pharmaceutics  
cyclohexane  
tiagabine: PR, pharmaceutics  
**microcrystalline cellulose**  
riboflavin  
**water**  
theophylline  
beta cyclodextrin  
starch  
**ethyl cellulose**  
cholesterol  
talc  
alcohol  
**hydroxypropylcellulose**  
**carboxymethylcellulose**  
povidone  
triacetin  
alginic acid  
**methylcellulose**  
**benzethonium chloride**  
polysorbate 80  
unindexed drug

CAS REGISTRY NO.: (clarithromycin) 81103-11-9; (ketoprofen) 22071-15-4, 57495-14-4; (indometacin) 53-86-1, 74252-25-8, 7681-54-1; (fluorouracil) 51-21-8; (phenacetin) 62-44-2; (eudragit) 24938-16-7, 51822-44-7, 9065-11-6; (lactose) 10039-26-6, 16984-38-6, 63-42-3, 64044-51-5; (sparfloxacin) 111542-93-9; (ibuprofen) 15687-27-1; (cyclohexane) 110-82-7; (tiagabine) 115103-54-3, 115103-55-4; (microcrystalline cellulose) 39394-43-9, 51395-75-6; (riboflavin) 83-88-5; (water) 7732-18-5; (theophylline) 58-55-9, 5967-84-0, 8055-07-0, 8061-56-1, 99007-19-9; (beta cyclodextrin) 7585-39-9; (starch) 9005-25-8, 9005-84-9; (ethyl cellulose) 9004-57-3; (cholesterol) 57-88-5; (talc) 14807-96-6; (alcohol) 64-17-5; (hydroxypropylcellulose) 9004-64-2; (carboxymethylcellulose) 8050-38-2, 9000-11-7, 9004-32-4, 9050-04-8; (povidone) 9003-39-8; (triacetin) 102-76-1; (alginic acid) 28961-37-7, 29894-36-8, 9005-32-7, 9005-38-3; (methylcellulose) 79484-92-7, 9004-67-5; (benzethonium chloride) 121-54-0; (polysorbate 80) 8050-83-7, 9005-65-6

CHEMICAL NAME: Eudragit

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ACCESSION NUMBER: 2001135768 EMBASE Full-text  
TITLE: Release characteristics of microspheres prepared by co-spray drying *Actinobacillus pleuropneumoniae* antigens and **aqueous ethyl-cellulose** dispersion.

AUTHOR: Liao C.W.; Cheng I.C.; Yeh K.S.; Lin F.Y.; Weng C.N.

CORPORATE SOURCE: C.N. Weng, Department of Pathobiology, Pig Research Institute Taiwan, Chu-Nan, Miaoli, Taiwan, China.  
CWL02@mail.prit.org.tw

SOURCE: Journal of Microencapsulation, (2001) Vol. 18, No. 3, pp. 285-297.

Refs: 18

ISSN: 0265-2048 CODEN: JOMIEF

COUNTRY: United Kingdom  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 004 Microbiology  
026 Immunology, Serology and Transplantation  
027 Biophysics, Bioengineering and Medical  
Instrumentation  
030 Pharmacology  
037 Drug Literature Index  
039 Pharmacy  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
ENTRY DATE: Entered STN: 30 Apr 2001  
Last Updated on STN: 30 Apr 2001

**ABSTRACT:** Using formalin inactivated *Actinobacillus pleuropneumoniae* antigens and ***aqueous ethylcellulose*** dispersions, microspheres of oral vaccines were developed by a co-spray drying process. The present study attempted to determine whether the dosage formulations of microspheres could form enteric matrices. To assess the enteric characteristics, an in vitro dissolution test was performed with the AQ6-AP microspheres; 95% of the *A. pleuropneumoniae* protein was released within 3 h at pH7, but there was no release at pH 1.5. The scanning microscopy revealed that the surface structure of AQ6-AP microspheres became porous at neutral pH. The SDS-PAGE analysis showed that the release rate of proteins from the microspheres was pH dependent not only for the AQ6-AP formulation but also when antigens of *A. pleuropneumoniae* were replaced with porcine serum. The results suggest that the *A. pleuropneumoniae* antigens were entrapped in the AQ6 microspheres under the acidic conditions. In a mouse model, oral immunization with AQ6-AP microspheres containing *A. pleuropneumoniae* evoked systemic IgG and mucosal IgA responses against *A. pleuropneumoniae* antigens. Thus, the present method may further provide an opportunity to develop oral vaccines and mucosal immunity.

CONTROLLED TERM: Medical Descriptors:  
\**Actinobacillus pleuropneumoniae*  
\*immunization  
    *aqueous solution*  
drug solubility  
drug inactivation  
drug synthesis  
aerosol  
drug dosage form  
intestine absorption  
in vitro study  
dissolution  
pH measurement  
drug release  
    *microencapsulation*  
scanning electron microscopy  
surface property  
porosity  
polyacrylamide gel electrophoresis  
chemical composition  
chemical analysis  
protein analysis  
drug formulation  
acidification  
antibody blood level  
intestine mucosa  
immune response  
immunity  
nonhuman

female  
mouse  
animal experiment  
animal model  
controlled study  
article  
Drug Descriptors:  
\*bacterial antigen: DV, drug development  
\*bacterial antigen: EC, endogenous compound  
\*bacterial antigen: PR, pharmaceutics  
\*bacterial antigen: PK, pharmacokinetics  
\*bacterial antigen: PO, oral drug administration  
\*bacterial antigen: SC, subcutaneous drug administration  
\*microsphere: PR, pharmaceutics  
bacterial vaccine: DV, drug development  
bacterial vaccine: EC, endogenous compound  
bacterial vaccine: PR, pharmaceutics  
bacterial vaccine: PK, pharmacokinetics  
bacterial vaccine: PO, oral drug administration  
bacterial vaccine: SC, subcutaneous drug administration  
**ethyl cellulose: PR, pharmaceutics**  
formaldehyde  
plasma protein: EC, endogenous compound  
immunoglobulin G: EC, endogenous compound  
immunoglobulin A: EC, endogenous compound  
**water**  
polymer  
latex  
lactose  
sugar  
polysaccharide  
**hydroxypropylmethylcellulose acetate succinate**  
nicotinamide adenine dinucleotide  
bovine serum albumin  
phosphate  
buffer  
**sodium chloride**  
magnesium stearate  
phenylpropanolamine: PR, pharmaceutics  
theophylline: PR, pharmaceutics  
antisera: EC, endogenous compound  
bacterium lipopolysaccharide: EC, endogenous compound  
hemolysin: EC, endogenous compound

CAS REGISTRY NO.: (ethyl cellulose) 9004-57-3; (formaldehyde) 50-00-0; (immunoglobulin G) 97794-27-9; (water) 7732-18-5; (lactose) 10039-26-6, 16984-38-6, 63-42-3, 64044-51-5; (**hydroxypropylmethylcellulose acetate succinate**) 71138-97-1; (nicotinamide adenine dinucleotide) 53-84-9; (phosphate) 14066-19-4, 14265-44-2; (**sodium chloride**) 7647-14-5; (magnesium stearate) 557-04-0; (phenylpropanolamine) 14838-15-4, 154-41-6, 4345-16-8, 48115-38-4; (theophylline) 58-55-9, 5967-84-0, 8055-07-0, 8061-56-1, 99007-19-9

CHEMICAL NAME: (1) Aquacoat  
COMPANY NAME: (1) FMC (United States)

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ACCESSION NUMBER: 2001028373 EMBASE Full-text  
TITLE: Improvement of **encapsulation** efficiency of

AUTHOR: Hino T.; Shimabayashi S.; Tanaka M.; Nakano M.; Okochi H.  
CORPORATE SOURCE: T. Hino, Faculty of Pharmaceutical Sciences, The University  
of Tokushima, Sho-machi 1-78-1, Tokushima 770-8505, Japan.  
hino@ph.tokushima-u.ac.jp  
SOURCE: Journal of Microencapsulation, (2001) Vol. 18, No. 1, pp.  
19-28.  
Refs: 16  
ISSN: 0265-2048 CODEN: JOMIEF  
COUNTRY: United Kingdom  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical  
Instrumentation  
029 Clinical Biochemistry  
037 Drug Literature Index  
039 Pharmacy  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
ENTRY DATE: Entered STN: 8 Feb 2001  
Last Updated on STN: 8 Feb 2001

ABSTRACT: **Water-in-oil-in-water** (w/o/w) emulsions \*\*\*encapsulating\*\*\* tryptophan or theophylline were prepared where these compounds are regarded as model drugs. The effects of **sodium chloride**\*\*\* on the drug entrapment into the w/o/w emulsions and on the separation of **aqueous** phases were studied. The degree of \*\*\*encapsulation\*\*\* of tryptophan in the w/o/w emulsion increased with the concentration of **sodium chloride** added in the inner \*\*\*aqueous\*\*\* phase, while it decreased with that in the outer \*\*\*aqueous\*\*\* phase. As for theophylline, although the degree increased with a concentration of **sodium chloride** in the inner phase, the effect was smaller than that on tryptophan. The difference in the effects between on tryptophan and on theophylline was attributed to their partition coefficients. Theophylline was easily leaked out from the inner phase to the outer **aqueous** phase after its dissolution and diffusion in the oil phase due to a higher partition coefficient. More than 55% of the \*\*\*aqueous\*\*\* phase was separated from the w/o/w emulsion within 24 h, when \*\*\*sodium\*\*\* **chloride** was not added in the inner **aqueous** phase. However, the separation was not observed when more than 0.2m \*\*\*sodium\*\*\* **chloride** was added. To the contrary, **sodium chloride**\*\*\* added in the outer **aqueous** phase accelerated the separation. It was, therefore, concluded that **sodium chloride**\*\*\* in the inner **aqueous** phase plays an important role in suppression of the separation and in **encapsulation** of the drug which does not penetrate into the oil membrane.

CONTROLLED TERM: Medical Descriptors:  
\***microencapsulation**  
emulsion  
**aqueous solution**  
phase transition  
chemical reaction  
chemical composition  
**drug capsule**  
phase separation  
concentration (parameters)  
drug mixture  
drug solubility  
partition coefficient  
dissolution

drug diffusion  
drug penetration  
membrane permeability  
lipid membrane  
controlled study  
article  
Drug Descriptors:  
\*tryptophan: CM, drug comparison  
\*tryptophan: PR, pharmaceutics  
\*theophylline: CM, drug comparison  
\*theophylline: PR, pharmaceutics  
hypertonic solution  
    water  
oil  
    sodium chloride  
surfactant  
albumin  
polyacrylic acid  
biochemical marker  
medium chain triacylglycerol  
drug carrier  
polyoxyethylene derivative  
hydrogenated castor oil  
food additive  
    cellulose

CAS REGISTRY NO.: (tryptophan) 6912-86-3, 73-22-3; (theophylline) 58-55-9, 5967-84-0, 8055-07-0, 8061-56-1, 99007-19-9; (water) 7732-18-5; (sodium chloride) 7647-14-5; (polyacrylic acid) 74350-43-9, 87003-46-1, 9003-01-4, 9003-04-7; (hydrogenated castor oil) 8001-78-3; (cellulose) 61991-22-8, 68073-05-2, 9004-34-6  
NAME OF PRODUCT: Triester F-180; Hexaglyn PR-15; HCO-60  
COMPANY NAME: Nikko Yakuhin (Japan)

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ACCESSION NUMBER: 1999000498 EMBASE Full-text  
TITLE: Calcium alginate capsules containing a hydrophilic polymer for the encapsulation of swine spermatozoa.  
AUTHOR: Torre M.L.; Maggi L.; Giunchedi P.; Conte U.; Vigo D.; Maffeo G.  
CORPORATE SOURCE: U. Conte, Dipartimento di Chimica Farmaceutica, Universita di Pavia, Viale Taramelli 12, 27100 Pavia, Italy  
SOURCE: S.T.P. Pharma Sciences, (1998) Vol. 8, No. 4, pp. 233-236.

Refs: 11  
ISSN: 1157-1489 CODEN: STSSE5

COUNTRY: France  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 010      Obstetrics and Gynecology  
                  037      Drug Literature Index  
                  039      Pharmacy

LANGUAGE: English  
SUMMARY LANGUAGE: English; French  
ENTRY DATE: Entered STN: 28 Jan 1999  
                  Last Updated on STN: 28 Jan 1999

ABSTRACT: A preparation method of calcium alginate beads containing swine spermatozoa was developed. A suspension usually employed for artificial insemination and containing living spermatozoa, to which was added

\*\*\*hydroxypropylmethylcellulose\*\*\* and **calcium chloride**, was dropped into a sodium alginate solution. Calcium ions diffusing out of the droplets, reacted with the sodium alginate, leading to the formation of a \*\*\*water\*\*\* -insoluble calcium alginate gel membrane. Half of the \*\*\*capsules\*\*\* obtained was cross-linked by interfacial polymerization using an **aqueous** solution of protamine sulphate. The two kinds of \*\*\*capsules\*\*\* (cross-linked and not) containing spermatozoa were then transferred to a suitable extender for swine sperm and their morphology (scanning electron microscope) and in vitro sperm viability (survival time, motility and acrosomal integrity) was studied.

CONTROLLED TERM: Medical Descriptors:  
\*encapsulation  
\*sperm preservation  
suspension  
artificial insemination  
cross linking  
polymerization  
**aqueous solution**  
scanning electron microscopy  
swine  
acrosome  
spermatozoon motility  
cell viability  
nonhuman  
controlled study  
animal cell  
article  
Drug Descriptors:  
\*calcium alginate: PR, pharmaceutics  
\*polymer: PR, pharmaceutics  
**hydroxypropylmethylcellulose: PR, pharmaceutics**  
**calcium chloride: PR, pharmaceutics**  
protamine sulfate: PR, pharmaceutics  
**methylcellulose**  
CAS REGISTRY NO.: (calcium alginate) 9005-35-0; (  
**hydroxypropylmethylcellulose**) 9004-65-3; (  
**calcium chloride**) 10043-52-4; (protamine sulfate) 9009-65-8; (**methylcellulose**) 79484-92-7, 9004-67-5  
CHEMICAL NAME: (1) Methocel  
COMPANY NAME: (1) Colorcon (United Kingdom); Farmitalia Carlo Erba (Italy); Sigma

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ACCESSION NUMBER: 2000:292298 BIOSIS Full-text  
DOCUMENT NUMBER: PREV200000292298  
TITLE: An enhanced process for **encapsulating** aspirin in ethyl **cellulose microcapsules** by solvent evaporation in an O/W emulsion.  
AUTHOR(S): Yang, C.-Y.; Tsay, S.-Y.; Tsiang, R. C.-C. [Reprint author]  
CORPORATE SOURCE: Department of Chemical Engineering, National Chung Cheng University, Chiayi, 621, China  
SOURCE: Journal of Microencapsulation, (May-June, 2000) Vol. 17, No. 3, pp. 269-277. print.  
CODEN: JOMIEF. ISSN: 0265-2048.  
DOCUMENT TYPE: Article  
LANGUAGE: English  
ENTRY DATE: Entered STN: 6 Jul 2000

Last Updated on STN: 7 Jan 2002

**ABSTRACT:** An enhanced process for **microencapsulating** aspirin in \*\*\*ethylcellulose\*\*\* was demonstrated using an oil-in-water emulsification/solvent evaporation technique. Methylene **chloride** (CH<sub>2</sub>Cl<sub>2</sub>) was used as the dispersed medium and **water** as the dispersing medium. The recovered weight, particle size distribution, aspirin loading efficiency, and the aspirin release rate of **microcapsules** were analysed. The addition of appropriate amounts of non-solvent (n-heptane) prior to the emulsification increases the recovered weight, but decreases the size of the formed **microcapsules**. The addition of non-solvent also changes the **microcapsule** characteristics, resulting in a coarser surface and an increased release rate. Increasing the polymer (**ethylcellulose**) concentration in the dispersed phase increases the size of the \*\*\*microcapsules\*\*\*, the recovered weight, and loading efficiency, but decreases the release rate. The release rate follows first-order kinetics during the first 12 h, suggesting a monolithic system with aspirin uniformly distributed in the **microcapsule**.

**CONCEPT CODE:** Pharmacology - General 22002  
Biochemistry methods - General 10050  
Biochemistry studies - General 10060  
Biophysics - General 10502  
**INDEX TERMS:** Major Concepts  
Methods and Techniques; Pharmaceuticals (Pharmacology)  
**INDEX TERMS:** Chemicals & Biochemicals  
aspirin: antiinflammatory-drug, pharmacokinetics  
**INDEX TERMS:** Methods & Equipment  
ethyl **cellulose microcapsules**: drug delivery method; solvent evaporation:  
**microencapsulation** process, oil-in-water emulsion, preparation method  
**REGISTRY NUMBER:** 50-78-2 (aspirin)

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**ACCESSION NUMBER:** 2000:109521 BIOSIS Full-text  
**DOCUMENT NUMBER:** PREV200000109521  
**TITLE:** Controlled release of aldicarb from carboxymethyl **cellulose** microspheres: In vitro and field applications.  
**AUTHOR(S):** Kok, Fatma N.; Arica, M. Yakup; Gencer, Oktay; Abak, Kazim; Hasirci, Vasif [Reprint author]  
**CORPORATE SOURCE:** Department of Biological Sciences, Biotechnology Research Unit, Middle East Technical University, 06531, Ankara, Turkey  
**SOURCE:** Pesticide Science, (Dec., 1999) Vol. 55, No. 12, pp. 1194-1202. print.  
**CODEN:** PSSCBG. **ISSN:** 0031-613X.  
**DOCUMENT TYPE:** Article  
**LANGUAGE:** English  
**ENTRY DATE:** Entered STN: 22 Mar 2000  
Last Updated on STN: 3 Jan 2002

**ABSTRACT:** Aldicarb is a carbamate pesticide that is widely used throughout the world in the protection of crops (eg cotton, nuts, potatoes, onion, tobacco, sugar beet and sugar cane). In Turkey, especially in the Cukurova region, it is used for the control of the cotton white fly (*Bemisia tabaci*) which attacks cotton plants cultivated in this region. Aldicarb contamination in surface and ground **water** is a serious problem in several countries, partly due to its high **water** solubility. It is also highly toxic to mammals. In order to overcome these problems, microspheres of aldicarb were prepared using carboxymethyl **cellulose** (CMC) as the biodegradable support material

cross-linked with aluminium **chloride**. A strong hysteresis behaviour was observed upon drying and reswelling. **Encapsulation** efficiency was in the range 12-23% and aldicarb contents of 5.7-10.3 mg per 100 mg of microspheres was achieved. In vitro release was distinctly Fickian, and Higuchi constants were very close to 0.5. Release in pots revealed that only one sample had a release capability for more than four weeks. In the cotton plot much longer durations of release (more than seven weeks) were observed while a commercial granular formulation released its content immediately. It was thus possible to construct a controlled pesticide release system that prolonged the bioavailability to about eight weeks.

CONCEPT CODE: Economic entomology - Chemical control and apparatus 60016  
Pest control: general, pesticides and herbicides 54600  
Economic entomology - Field, flower and truck crops 60004

INDEX TERMS: Major Concepts  
Economic Entomology; Pest Assessment Control and Management; Pesticides

INDEX TERMS: Chemicals & Biochemicals  
aldicarb: insecticide

INDEX TERMS: Methods & Equipment  
carboxymethyl **cellulose** microsphere release system: controlled release, field application, in vitro application, pest control method

GEOGRAPHICAL TERMS: Turkey (Palearctic region)

ORGANISM: Classifier  
Homoptera 75324  
Super Taxa  
Insecta; Arthropoda; Invertebrata; Animalia  
Organism Name  
Bemisia tabaci [cotton white fly]: pest  
Taxa Notes  
Animals, Arthropods, Insects, Invertebrates

ORGANISM: Classifier  
Malvaceae 26330  
Super Taxa  
Dicotyledones; Angiospermae; Spermatophyta; Plantae  
Organism Name  
cotton: host  
Taxa Notes  
Angiosperms, Dicots, Plants, Spermatophytes, Vascular Plants

REGISTRY NUMBER: 116-06-3 (aldicarb)

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ACCESSION NUMBER: 1999:106559 BIOSIS Full-text

DOCUMENT NUMBER: PREV199900106559

TITLE: Effect of protective colloids on the induction of polymorphic changes in indomethacin agglomerates after solvent evaporation from o/w emulsions.

AUTHOR(S): Lin, S.-Y. [Reprint author]; Chen, K.-S.; Teng, H.-S.

CORPORATE SOURCE: Dep. Med. Res. Educ., Veterans Gen. Hosp.-Taipei, Taipei, Taiwan

SOURCE: Journal of Microencapsulation, (Jan.-Feb., 1999) Vol. 16, No. 1, pp. 39-47. print.

CODEN: JOMIEF. ISSN: 0265-2048.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 4 Mar 1999  
Last Updated on STN: 4 Mar 1999

**ABSTRACT:** Indomethacin (IMC) agglomerates were prepared by the solvent evaporation process from o/w emulsions containing different protective colloids in the external aqueous solution. The types of protective colloids inducing the polymorphic transformation of IMC in the agglomerates without wall material were investigated. The composition and its polymorphs were evaluated from the X-ray diffraction patterns, IR spectra and DSC thermograms. The results indicate that when pectin, beta-cyclodextrin, sodium alginate or sodium dodecyl supphase acted as a protective colloid, the respective IMC agglomerates consisted only of the alpha form of IMC. When gelatin or hydroxypropyl \*\*\*methylcellulose\*\*\* was used as a protective colloid, the amorphous, alpha and gamma forms as well as methylene **chloride** solvates of IMC were found in the IMC agglomerates. There was only methylene **chloride** solvate of IMC with a small amount of amorphous form in the IMC agglomerates prepared from albumin as a protective colloid, while IMC agglomerates prepared from **methylcellulose**, polyvinyl alcohol or biosoluble polymer consisted of the mixture of amorphous and a forms, and methylene \*\*\*chloride\*\*\* solvate of IMC. When polyvinyl pyrrolidone was applied to act as a protective colloid, the mixture of methylene **chloride** solvate and gamma form of IMC with less quantity of amorphous form was found in its IMC agglomerates. This strongly suggests that the composition of IMC agglomerates prepared from the solvent evaporation process was Significantly influenced by the type of protective colloids used.

CONCEPT CODE: Pharmacology - General 22002  
Biochemistry methods - General 10050  
Biochemistry studies - General 10060  
Biophysics - Molecular properties and macromolecules  
10506  
Pathology - Therapy 12512  
Pharmacology - Drug metabolism and metabolic stimulators  
22003  
Pharmacology - Clinical pharmacology 22005  
Routes of immunization, infection and therapy 22100  
In vitro cellular and subcellular studies 32600

## INDEX TERMS: Major Concepts

INDEX TERMS: Methods and Techniques; Pharmaceuticals (Pharmacology)  
Chemicals & Biochemicals  
colloids; indomethacin agglomerates: molecular  
characteristics, polymorphic changes, preparation;  
indomethacin: pharmaceutical; oil-in-water  
emulsion; solubility

INDEX TERMS: emulsions; solvents  
Methods & Equipment  
solvent evaporation process: *microencapsulation*  
method

REGISTRY NUMBER: 53-86-1 (indomethacin)

L1117 ANSWER 57 OF 62 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1997:397397 BIOSIS Full-text

DOCUMENT NUMBER: PREV199799696600

**TITLE:**

Development of multiparticulate-system composed of sustained release-microspheres of pseudoephedrine and HCl and immediate release-pellets of terfenadine using solvent evaporation method and spherically agglomerated crystallization process.

AUTHOR(S): Rhee, Gye Ju [Reprint author]; Do, Ki Chan; Kim, Eun Hee; Park, Jong Bum; Whang, Sung Joo

CORPORATE SOURCE: Coll. Pharmacy, Chungnam Natl. Univ., Taejon, South Korea

SOURCE: Yakhak Hoeji, (1997) Vol. 41, No. 3, pp. 305-311.  
CODEN: YAHOA3. ISSN: 0513-4234.

DOCUMENT TYPE: Article  
LANGUAGE: Korean  
ENTRY DATE: Entered STN: 10 Sep 1997  
Last Updated on STN: 10 Sep 1997

ABSTRACT: Sustained release-microspheres and immediate release-pellets were prepared to develop a controlled release multiparticulate system containing both **water** soluble and insoluble drugs. **Pseudoephedrine cndot HCl** (EPD) and terfenadine (TRF) were used as model drugs, respectively. Sustained release-EPD microspheres were prepared by solvent evaporation method using Eudragit RL or RS as a matrix combined with pH-sensitive film coating. Smaller EPD microspheres were obtained when smaller amount of Eudragit as a matrix material or larger amount of magnesium stearate as a dispersing agent was used. However the obtained microspheres did not show sufficient sustained release characteristics. About 97% of EPD was released after 1 hr irrespective of matrix material used. Subsequent coating of the microspheres with pH-insensitive polymer such as Eudragit RS or **ethylcellulose** (EC) resulted good sustained release profiles. Especially EC-coated EPD micropheres (1:1 of microspheres:polymer w/w ratio) resulted in 37.5, 73.3 and 92.0% release of **encapsulated** EPD in distilled **water** after 1, 3 and 7 hr, respectively. It corresponds to mean dissolution time (MDT) of 2.3 hr, which is much larger than that of un-coated EPD microspheres (0.048 hr). Immediate release TRF pellets were prepared by spherically agglomerated crystallization using Eudragit E as an inert matrix and methylene \*\*\*chloride\*\*\* as a liquid binder. Using Eudragit E alone as a matrix resulted in satisfactory physical properties of the pellets such as sphericity, surface texture and flowability, but led to slower release of TRF from pellets than un-modified fRF powder (MDT of 1.70 vs 1.43 hr in pH 1.2 dissolution medium). Introducing propylene glycol or sodium lauryl sulfate as an emulsifier brought about faster release of TRF from pellets (MDT of 1.14 and 0.95 hr, respectively). In conclusion, **microencapsulation** by solvent evaporation combined with film coating and spherically agglomerated crystallization were successfully utilized to prepare controlled release multiparticulate system composed of sustained release EPD-microspheres and immediate release TRF pellets.

CONCEPT CODE: Biochemistry studies - General 10060  
Pharmacology - General 22002

INDEX TERMS: Major Concepts  
Biochemistry and Molecular Biophysics; Pharmacology

INDEX TERMS: Chemicals & Biochemicals  
TERFENADINE; EUDRAGIT; **ETHYLCELLULOSE**;  
PROPYLENE GLYCOL; SODIUM LAURYL SULFATE

INDEX TERMS: Miscellaneous Descriptors  
**ETHYLCELLULOSE**; EUDRAGIT; FLOWABILITY;  
IMMEDIATE RELEASE-PELLETS; MEAN DISSOLUTION TIME;  
METHODOLOGY; MULTIPARTICULATE-SYSTEM; PHARMACEUTICALS;  
PHARMACOLOGICAL METHOD; PROPYLENE GLYCOL; PSEUDOEPHEDRIN  
HYDROCHLORIDE; SODIUM LAURYL SULFATE; SOLVENT  
EVAPORATION METHOD; SPHERICALLY AGGLOMERATED  
CRYSTALLIZATION PROCESS; SPHERICITY; SURFACE TEXTURE;  
SUSTAINED RELEASE-MICROSPHERES; TERFENADINE

REGISTRY NUMBER: 50679-08-8 (TERFENADINE)  
9004-57-3 (**ETHYLCELLULOSE**)  
57-55-6 (PROPYLENE GLYCOL)  
151-21-3 (SODIUM LAURYL SULFATE)  
9065-11-6 (EUDRAGIT)

ACCESSION NUMBER: 1997:314454 BIOSIS Full-text  
DOCUMENT NUMBER: PREV199799604942  
TITLE: Preparation of **capsules** using the temperature sensitive polymer and properties.  
AUTHOR(S): Tanaka, Masato; Ueda, Yusuke; Kimura, Isao; Taguchi, Yoshinari  
CORPORATE SOURCE: Dep. Chem. Eng., Niigata Univ., 2-8050 Ikarashi, Niigata-shi, Niigata 950-21, Japan  
SOURCE: Nippon Shokuhin Kagaku Kogaku Kaishi, (1997) Vol. 44, No. 3, pp. 199-204.  
ISSN: 1341-027X.  
DOCUMENT TYPE: Article  
LANGUAGE: Japanese  
ENTRY DATE: Entered STN: 26 Jul 1997  
Last Updated on STN: 26 Jul 1997  
ABSTRACT: **Capsules** were prepared by using the temperature sensitive polymer (polyvinylacetal diethylaminoacetate; AEA) as shell material. Salad oil as a core material was **encapsulated** and Sodium alginate (AN) was used by mixing with AEA in order to prevent the core material from leaking. The aqueous solution of 5 degree C composed of AEA and AN, in which salad oil was dispersed, was dropped into the aqueous solution of 80 degree C dissolving \*\*\*calcium\*\*\* **chloride** through the nozzle. It was investigated how the preparation conditions affected the properties of **capsules**.  
\*\*\*Capsules\*\*\* prepared were spherical and matrix type. As the concentration of AEA increased, the **capsule** sizes increased and the content of core material decreased. Furthermore, it was found that the increase in the concentration of AEA could repress the release of **water** contained in the matrix and core material. The degree of this repression was increased by coating the surface of **capsules** due to **methylcellulose** (MC).  
CONCEPT CODE: Biochemistry methods - General 10050  
Biophysics - Bioengineering 10511  
INDEX TERMS: Major Concepts  
Biochemistry and Molecular Biophysics; Methods and Techniques  
INDEX TERMS: Chemicals & Biochemicals  
SODIUM  
INDEX TERMS: Miscellaneous Descriptors  
chemical industry; AEA; BIOBUSINESS; **CAPSULE** PREPARATION; METHODOLOGY; POLYVINYLCETAL DIETHYLAMINOACETATE; SODIUM ALGINATE; SYNTHETIC METHOD; TEMPERATURE SENSITIVE POLYMER  
REGISTRY NUMBER: 7440-23-5 (SODIUM)

L117 ANSWER 59 OF 62 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on  
STN  
ACCESSION NUMBER: 1994:182964 BIOSIS Full-text  
DOCUMENT NUMBER: PREV199497195964  
TITLE: Porosity-controlled **ethylcellulose** film coating: II. Spontaneous porous film formation in the spraying process and its solute permeability.  
AUTHOR(S): Narisawa, Shinji [Reprint author]; Yoshino, Hiroyuki; Hirakawa, Yoshiyuki; Noda, Kazuo  
CORPORATE SOURCE: Pharmaceutics Res. Lab., Tanabe Seiyaku Co. Ltd., 16-89, Kashima 3-chome, Yodogawa-ku, Osaka 532, Japan  
SOURCE: International Journal of Pharmaceutics (Amsterdam), (1994) Vol. 104, No. 2, pp. 95-106.  
CODEN: IJPHDE. ISSN: 0378-5173.  
DOCUMENT TYPE: Article  
LANGUAGE: English



LANGUAGE: English  
ENTRY DATE: Entered STN: 27 Feb 1993  
Last Updated on STN: 28 Feb 1993  
ABSTRACT: **Microcapsules** of indomethacin and ascorbic acid were prepared by phase separation of **ethylcellulose** from cyclohexane using polyisobutylene as a coacervation inducing agent. Different amounts of solid \*\*\*sodium\*\*\* **chloride** were added to the **microcapsule** wall in order to alter the porosity of the film and hence to enhance the release of the core materials. The **microcapsules** prepared were matrix type, coacervates of many drug particles and **ethylcellulose**. The release of the poorly **water**-soluble indomethacin was found to be very slow from the **ethylcellulose microcapsules**, but it was accelerated considerably with increasing amounts of **sodium** \*\*\*chloride.\*\*\* Indomethacin released through the pores formed when \*\*\*sodium\*\*\* **chloride** dissolved from the **microcapsular** film. The release was controlled by the solubility at the weakly acidic drug. Thus a good linearity for the release data was obtained with the Hixson-Crowell cube-root law. The release of the **water**-soluble ascorbic acid from matrix-type **microcapsules** was observed to be incomplete and strongly dependent on the core/wall ratio of the **microcapsules**. The release of ascorbic acid accelerated in some degree as a function of **sodium** \*\*\*chloride\*\*\* from the **microcapsules** of higher core to wall ratio, but the enhancement in drug release was quite minimal with the thicker walled ones. **Sodium chloride** particles acted as pore formers, only at the surface of the inhomogeneous **microcapsular** matrices. The release of the drug was considered to be diffusion controlled having a biphasic release profile against the square root of time.

CONCEPT CODE: Biochemistry studies - General 10060  
Biophysics - Molecular properties and macromolecules 10506  
Pathology - Inflammation and inflammatory disease 12508  
Pathology - Therapy 12512  
Metabolism - General metabolism and metabolic pathways 13002  
Pharmacology - General 22002  
Pharmacology - Drug metabolism and metabolic stimulators 22003  
Pharmacology - Clinical pharmacology 22005  
Pharmacology - Connective tissue, bone and collagen-acting drugs 22012  
INDEX TERMS: Major Concepts  
Biochemistry and Molecular Biophysics; Metabolism;  
Pathology; Pharmacology  
INDEX TERMS: Chemicals & Biochemicals  
**ETHYLCELLULOSE; SODIUM CHLORIDE; INDOMETHACIN**  
INDEX TERMS: Miscellaneous Descriptors  
ANTIINFLAMMATORY-DRUG; CONTROLLED RELEASE; INDOMETHACIN;  
PHARMACEUTICAL ADJUNCT; PHARMACOKINETICS; **WATER**  
SOLUBILITY  
REGISTRY NUMBER: 9004-57-3 (**ETHYLCELLULOSE**)  
7647-14-5 (**SODIUM CHLORIDE**)  
53-86-1 (INDOMETHACIN)

L117 ANSWER 62 OF 62 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on  
STN

ACCESSION NUMBER: 1978:192291 BIOSIS Full-text

DOCUMENT NUMBER: PREV197866004788; BA66:4788

TITLE: INVESTIGATION OF THE PROCESS OF MICRO **ENCAPSULATION** OF **WATER** SOLUBLE VITAMINS.

AUTHOR(S): KOZLOVA I V [Reprint author]; DONTSOVA G I; CHLENOV V A;  
LEBEDENKO V YA; GRYADUNOVA G P

CORPORATE SOURCE: ALL-UNION VITAMIN RES INST, MINIST MED IND USSR, MOSCOW,  
USSR

SOURCE: Farmatsiya (Moscow), (1977) Vol. 26, No. 6, pp. 37-39.  
CODEN: FRMTAL. ISSN: 0367-3014.

DOCUMENT TYPE: Article

FILE SEGMENT: BA

LANGUAGE: RUSSIAN

ABSTRACT: The process of **microencapsulating** finely pulverized ascorbic acid and thiamine **chloride** by the method of isolating the new phase of a highly concentrated polymer (ethyl-, acetyl-, acetophthalate **\*\*\*celluloses\*\*\***) in an organic solvent (methyl-ethyl ketone, acetone, hexane) depends on the concentration of the polymer and its viscosity. The rate of release of **water-soluble** vitamins from **microcapsules** is influenced by the type of polymer coating. The time for releasing 90% of the medicinal substances used in vitro tests does not exceed 30 min.

CONCEPT CODE: Biochemistry methods - Vitamins 10053  
Biochemistry studies - Vitamins 10063  
Pharmacology - General 22002  
In vitro cellular and subcellular studies 32600

INDEX TERMS: Major Concepts  
Biochemistry and Molecular Biophysics; Pharmacology

INDEX TERMS: Miscellaneous Descriptors  
ASCORBIC-ACID THIAMINE/

REGISTRY NUMBER: 50-81-7Q (ASCORBIC-ACID)  
62624-30-0Q (ASCORBIC-ACID)  
59-43-8 (THIAMINE)

=> d his full

(FILE 'HOME' ENTERED AT 08:40:27 ON 05 MAR 2007)

FILE 'STNGUIDE' ENTERED AT 08:40:33 ON 05 MAR 2007  
D COST

FILE 'CAPLUS' ENTERED AT 08:48:32 ON 05 MAR 2007  
E US2005-559519/APPS

L1 1 SEA ABB=ON PLU=ON US2005-559519/AP  
D SCA  
SEL RN

FILE 'REGISTRY' ENTERED AT 08:50:20 ON 05 MAR 2007

L2 7 SEA ABB=ON PLU=ON (10043-52-4/B1 OR 7647-14-5/B1 OR 7786-30-3  
/B1 OR 9004-62-0/B1 OR 9004-64-2/B1 OR 9004-65-3/B1 OR  
9004-67-5/B1)

L3 8522 SEA ABB=ON PLU=ON CELLULOSE/CNS

L4 4 SEA ABB=ON PLU=ON L2 AND L3  
D SCA

FILE 'STNGUIDE' ENTERED AT 08:51:17 ON 05 MAR 2007

FILE 'REGISTRY' ENTERED AT 09:25:04 ON 05 MAR 2007

L5 3 SEA ABB=ON PLU=ON L2 NOT L4  
D SCA

FILE 'CAPLUS' ENTERED AT 09:25:56 ON 05 MAR 2007

L6 7 SEA ABB=ON PLU=ON MOTOUNE S?/AU

L\*\*\* DEL 33 S KEDA Y?/AU

L7 6112 SEA ABB=ON PLU=ON IKEDA Y?/AU

L8 7 SEA ABB=ON PLU=ON L6 AND L7  
D SCA

E DRUG DELIVERY SYSTEMS+NT/CT

E DRUG DELIVERY SYSTEMS+ALL/CT

E DRUG DELIVERY SYSTEMS+MAX/CT

L9 149363 SEA ABB=ON PLU=ON ?CAPSUL?/BI

L\*\*\* DEL 0 S DRUG DELIVERY SYSTEMS+OLD/NT

L10 227466 SEA ABB=ON PLU=ON DRUG DELIVERY SYSTEMS+OLD/CT

L11 25392 SEA ABB=ON PLU=ON L10 (L) L9

L12 414044 SEA ABB=ON PLU=ON ?CELLULOS?/BI

L13 205107 SEA ABB=ON PLU=ON L3

L14 35968 SEA ABB=ON PLU=ON L4  
E CHLORIDES+ALL/CT

L15 4316 SEA ABB=ON PLU=ON ALKALI METAL CHLORIDES/CT

L16 1210 SEA ABB=ON PLU=ON ALKALINE EARTH CHLORIDES/CT

L17 623 SEA ABB=ON PLU=ON TRANSITION METAL CHLORIDES/CT

L18 1156 SEA ABB=ON PLU=ON RARE EARTH CHLORIDES/CT

L19 642 SEA ABB=ON PLU=ON INORGANIC CHLORID?/BI

L20 187625 SEA ABB=ON PLU=ON L5

L21 150 SEA ABB=ON PLU=ON L11 AND L14 AND L20

L22 1668122 SEA ABB=ON PLU=ON (THU OR BAC OR DMA OR PAC OR PKT)/RL

L\*\*\* DEL 0 S L4 (L) L5 (L) L22

L\*\*\* DEL 0 S (L4 (L) L22) (L) (L5 (L) L22)

L23 614 SEA ABB=ON PLU=ON (L4 (L) L22) AND (L5 (L) L22)

L24 132 SEA ABB=ON PLU=ON L23 AND L11  
E SALT+ALL/CT

E SOLUTION+ALL/CT

E E2+ALL/CT  
 L\*\*\* DEL 6 S (SALT/BI OR SALINE/BI) (2A) (SOLUTION?/BI)/BI  
 L25 93555 SEA ABB=ON PLU=ON (SALT OR SALINE)/BI (2A) SOLUTION?/BI  
 L26 2 SEA ABB=ON PLU=ON L24 AND L25  
 D SCA  
 L27 2 SEA ABB=ON PLU=ON L21 AND L25  
 D SCA  
 L28 38 SEA ABB=ON PLU=ON L24 AND SOLUTION?/BI

FILE 'REGISTRY' ENTERED AT 09:56:12 ON 05 MAR 2007  
 L29 1 SEA ABB=ON PLU=ON WATER/CN

FILE 'CAPLUS' ENTERED AT 09:56:21 ON 05 MAR 2007

L\*\*\* DEL 1 S L24 AND 29  
 L30 3 SEA ABB=ON PLU=ON L24 AND L29  
 D SCA  
 L31 21 SEA ABB=ON PLU=ON L28 AND (WATER/BI OR AQUEOUS/BI)  
 D KWIC 1-10  
 L32 13 SEA ABB=ON PLU=ON (L5 (L) L22) AND (L29 (L) L22) AND L11  
 D SCA  
 L\*\*\* DEL 355 S 32 AND L12  
 L33 4 SEA ABB=ON PLU=ON L32 AND L12  
 D SCA  
 L34 4 SEA ABB=ON PLU=ON (L13 OR L14) AND L32  
 D SCA  
 L35 16 SEA ABB=ON PLU=ON L26 OR L27 OR L30 OR L32 OR L33  
 L36 7 SEA ABB=ON PLU=ON L26 OR L27 OR L30 OR L33  
 D SCA  
 L37 272 SEA ABB=ON PLU=ON L11 AND (L12 OR L13 OR L14) AND (L15 OR  
 L16 OR L17 OR L18 OR L19 OR L20)  
 L38 201 SEA ABB=ON PLU=ON L11 AND (L12 OR L13 OR L14) AND ((L15 OR  
 L16 OR L17 OR L18 OR L19 OR L20) (L) L22)  
 L39 112 SEA ABB=ON PLU=ON L11 AND (L12 OR L13 OR L14) AND (L15 OR  
 L16 OR L17 OR L18 OR L19 OR L20) AND (L29 OR WATER/BI OR  
 AQUEOUS/BI OR L25)  
 L40 105 SEA ABB=ON PLU=ON L39 NOT L36  
 D KWIC 1-10  
 L41 5 SEA ABB=ON PLU=ON L39 AND (L29 (L) L22)  
 D SCA  
 L42 3 SEA ABB=ON PLU=ON L25 AND L40  
 D SCA  
 L43 79 SEA ABB=ON PLU=ON L11 AND (L12 OR L13 OR L14) AND ((L15 OR  
 L16 OR L17 OR L18 OR L19 OR L20) (L) L22) AND (L29 OR WATER/BI  
 OR AQUEOUS/BI OR L25)  
 L44 69 SEA ABB=ON PLU=ON L43 NOT (L36 OR (L41 OR L42))  
 D KWIC 1-10  
 E ACTIVITY+ALL/CT  
 E E2+ALL/CT  
 L45 3 SEA ABB=ON PLU=ON L44 AND ?ACTIVI?/BI  
 D KWIC 1-3  
 L46 10415 SEA ABB=ON PLU=ON WATER/BI (1A) ACTIVIT?/BI  
 L47 2 SEA ABB=ON PLU=ON L43 AND L46  
 D SCA  
 L48 5 SEA ABB=ON PLU=ON L43 AND L25  
 D SCA  
 L49 68 SEA ABB=ON PLU=ON L44 NOT (L47 OR L48)  
 L50 17 SEA ABB=ON PLU=ON L43 AND EXTRACT?/BI  
 D SCA  
 L51 27 SEA ABB=ON PLU=ON L26 OR L27 OR L30 OR L33 OR L41 OR L42 OR  
 L47 OR L48 OR L50

D COST

L52 1 SEA ABB=ON PLU=ON (L6 OR L7) AND L51

FILE 'MEDLINE' ENTERED AT 10:53:06 ON 05 MAR 2007

L53 1 SEA ABB=ON PLU=ON L6 AND L7

D TRIAL

L54 82526 SEA ABB=ON PLU=ON ?CAPSUL?

L55 6771 SEA ABB=ON PLU=ON CAPSULES/CT

L56 49650 SEA ABB=ON PLU=ON SODIUM CHLORIDE

D TRIAL

D TRIAL 100

L57 2701 SEA ABB=ON PLU=ON MAGNESIUM CHLORIDE

L58 7001 SEA ABB=ON PLU=ON CALCIUM CHLORIDE

L59 98118 SEA ABB=ON PLU=ON CHLORIDES+NT/CT

L60 58826 SEA ABB=ON PLU=ON ?CELLULOS?

L61 3263 SEA ABB=ON PLU=ON L4

L62 367309 SEA ABB=ON PLU=ON WATER

L63 1169 SEA ABB=ON PLU=ON WATER ACTIVIT?

L64 73275 SEA ABB=ON PLU=ON AQUEOUS

L65 181831 SEA ABB=ON PLU=ON EXTRACT

L66 356191 SEA ABB=ON PLU=ON EXTRACT?

L67 9 SEA ABB=ON PLU=ON (L54 OR L55) AND (L56 OR L57 OR L58 OR L59) AND (L60 OR L61) AND L62

D TRIAL 1-9

L68 0 SEA ABB=ON PLU=ON (L54 OR L55) AND (L56 OR L57 OR L58 OR L59) AND (L60 OR L61) AND L63

L69 6 SEA ABB=ON PLU=ON (L54 OR L55) AND (L56 OR L57 OR L58 OR L59) AND (L60 OR L61) AND (L63 OR L64 OR L65 OR L66)

L70 3 SEA ABB=ON PLU=ON L69 NOT L67

D TRIAL 1-3

D KWIC 1-3

L71 19619 SEA ABB=ON PLU=ON (SALT OR SALINE)/BI (2A) SOLUTION?/BI

L72 311 SEA ABB=ON PLU=ON (L54 OR L55) AND L71

L73 68 SEA ABB=ON PLU=ON (L54 OR L55) AND L71 AND L66

D TRIAL 1-10

L74 6771 SEA ABB=ON PLU=ON CAPSULES/CT

L75 3745 SEA ABB=ON PLU=ON DOSAGE FORMS/CT

L76 2 SEA ABB=ON PLU=ON L73 AND (L74 OR L75)

D TRIAL 1-2

D KWIC 1-2

L77 18 SEA ABB=ON PLU=ON L72 AND L74

D TRIAL 1-18

D KWIC 1-18

D KWIC 1-18

L78 0 SEA ABB=ON PLU=ON L77 AND (L60 OR L61)

L79 23 SEA ABB=ON PLU=ON (L54 OR L55) AND (L56 OR L57 OR L58 OR L59) AND (L60 OR L61)

L80 14 SEA ABB=ON PLU=ON L79 NOT L67

D TRIAL 1-14

L81 23 SEA ABB=ON PLU=ON L67 OR L80

L82 9 SEA ABB=ON PLU=ON L81 AND WATER

L83 0 SEA ABB=ON PLU=ON L80 AND WATER

L84 3 SEA ABB=ON PLU=ON L80 AND (L62 OR L63 OR L64 OR L65 OR L66)

D TRIAL 1-3

L85 4 SEA ABB=ON PLU=ON L80 AND SOLUTION?

D TRIAL 1-4

L86 15 SEA ABB=ON PLU=ON L79 AND ((L62 OR L63 OR L64 OR L65 OR L66) OR SALT OR SAILIN? OR SOLUTION?)

FILE 'EMBASE' ENTERED AT 13:10:28 ON 05 MAR 2007

FILE 'MEDLINE' ENTERED AT 13:10:46 ON 05 MAR 2007  
L87 0 SEA ABB=ON PLU=ON L53 AND (L67 OR L86)

FILE 'EMBASE' ENTERED AT 13:11:06 ON 05 MAR 2007

L88 2 SEA ABB=ON PLU=ON L6 AND L7  
L89 80395 SEA ABB=ON PLU=ON ?CAPSUL?  
E CAPSULE+ALL/CT  
E E1+ALL/CT  
E E1+BT/CT  
L90 68198 SEA ABB=ON PLU=ON (L56 OR L57 OR L58)  
E CHLORIDE+ALL/CT  
L91 191889 SEA ABB=ON PLU=ON CHLORIDE?  
L92 43712 SEA ABB=ON PLU=ON ?CELLULOS?  
L93 110 SEA ABB=ON PLU=ON L89 AND (L90 OR L91) AND L92  
L94 50953 SEA ABB=ON PLU=ON WATER/CT  
L95 7 SEA ABB=ON PLU=ON L93 AND L94  
D TRIAL 1-7  
L96 22 SEA ABB=ON PLU=ON L93 AND WATER  
L97 0 SEA ABB=ON PLU=ON L93 AND WATER ACTIVIT?  
L98 22 SEA ABB=ON PLU=ON L93 AND AQUEOUS  
L99 7 SEA ABB=ON PLU=ON L93 AND EXTRACT?  
L100 15 SEA ABB=ON PLU=ON L96 NOT L95  
D TRIAL 1-15  
D KWIC 1-15  
L101 11 SEA ABB=ON PLU=ON L98 NOT L96  
D KWIC 1-11  
L102 6 SEA ABB=ON PLU=ON L99 NOT L95  
D KWIC 1-6  
L103 1 SEA ABB=ON PLU=ON L102 AND WATER  
D TRIAL  
L104 33 SEA ABB=ON PLU=ON L95 OR L96 OR L98  
D COST  
L105 11 SEA ABB=ON PLU=ON L96 AND L98

FILE 'BIOSIS' ENTERED AT 13:28:27 ON 05 MAR 2007

L106 1 SEA ABB=ON PLU=ON L6 AND L7  
L107 71 SEA ABB=ON PLU=ON L89 AND (L90 OR L91) AND L92  
L108 21 SEA ABB=ON PLU=ON L107 AND WATER  
L109 0 SEA ABB=ON PLU=ON L107 AND WATER ACTIVIT?

FILE 'REGISTRY' ENTERED AT 13:31:47 ON 05 MAR 2007

FILE 'CAPLUS' ENTERED AT 13:31:50 ON 05 MAR 2007

D STAT QUE L8  
D STAT QUE L52  
L110 7 SEA ABB=ON PLU=ON L8 OR L52

FILE 'MEDLINE' ENTERED AT 13:32:23 ON 05 MAR 2007  
D STAT QUE L53

FILE 'EMBASE' ENTERED AT 13:32:35 ON 05 MAR 2007  
D STAT QUE L88

FILE 'BIOSIS' ENTERED AT 13:32:43 ON 05 MAR 2007  
D STAT QUE L106

FILE 'CAPLUS, MEDLINE, EMBASE, BIOSIS' ENTERED AT 13:33:02 ON 05 MAR 2007  
L111 7 DUP REM L110 L53 L88 L106 (4 DUPLICATES REMOVED)  
ANSWERS '1-7' FROM FILE CAPLUS

D IBIB ABS HITIND HITSTR L111 1-7

FILE 'REGISTRY' ENTERED AT 13:33:35 ON 05 MAR 2007

FILE 'CAPLUS' ENTERED AT 13:33:37 ON 05 MAR 2007

D STAT QUE L26  
D STAT QUE L27  
D STAT QUE L30  
D STAT QUE L33  
D STAT QUE L41  
D STAT QUE L42  
D STAT QUE L47  
D STAT QUE L48  
D STAT QUE L50

L112 26 SEA ABB=ON PLU=ON (L26 OR L27 OR L30 OR L33 OR L41 OR L42 OR L47 OR L48 OR L50) NOT L110

FILE 'MEDLINE' ENTERED AT 13:34:51 ON 05 MAR 2007

D STAT QUE L67  
D STAT QUE L86

L113 15 SEA ABB=ON PLU=ON L67 OR L86

FILE 'EMBASE' ENTERED AT 13:35:15 ON 05 MAR 2007

D STAT QUE L95  
D STAT QUE L105

L114 14 SEA ABB=ON PLU=ON (L95 OR L105) NOT L88

FILE 'MEDLINE' ENTERED AT 13:35:50 ON 05 MAR 2007

L115 15 SEA ABB=ON PLU=ON L113 NOT L53

FILE 'BIOSIS' ENTERED AT 13:36:26 ON 05 MAR 2007

D STAT QUE L108  
L116 21 SEA ABB=ON PLU=ON L108 NOT L106

FILE 'CAPLUS, MEDLINE, EMBASE, BIOSIS' ENTERED AT 13:37:03 ON 05 MAR 2007

L117 62 DUP REM L112 L115 L114 L116 (14 DUPLICATES REMOVED)

ANSWERS '1-26' FROM FILE CAPLUS  
ANSWERS '27-41' FROM FILE MEDLINE  
ANSWERS '42-53' FROM FILE EMBASE  
ANSWERS '54-62' FROM FILE BIOSIS

D IBIB ABS HITIND L117 1-26  
D IALL L117 27-62

FILE HOME

FILE STNGUIDE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Mar 2, 2007 (20070302/UP).

FILE CAPLUS

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FILE COVERS 1907 - 5 Mar 2007 VOL 146 ISS 11  
FILE LAST UPDATED: 4 Mar 2007 (20070304/ED)

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FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file  
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STRUCTURE FILE UPDATES: 4 MAR 2007 HIGHEST RN 924728-01-8  
DICTIONARY FILE UPDATES: 4 MAR 2007 HIGHEST RN 924728-01-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

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experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

FILE MEDLINE

FILE LAST UPDATED: 3 Mar 2007 (20070303/UP). FILE COVERS 1950 TO DATE.

All regular MEDLINE updates from November 15 to December 16 have been  
added to MEDLINE, along with 2007 Medical Subject Headings (MeSH(R))  
and 2007 tree numbers.

The annual reload will be available in early 2007.

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

FILE EMBASE

FILE COVERS 1974 TO 5 Mar 2007 (20070305/ED)

EMBASE is now updated daily. SDI frequency remains weekly (default)  
and biweekly.

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

FILE BIOSIS

FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 28 February 2007 (20070228/ED)